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Hilgardite, $Ca_2[B_5O_9]Cl \cdot H_2O$: a piezoelectric zeolite-type pentaborate

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Abstract

Hilgardite, $Ca_2B_5O_9Cl \cdot H_2O$, from Choctow Salt Dome, Iberville Parish, Louisiana, is monoclinic, space group Aa, with unit-cell dimensions a = 11.438(2), b = 11.318(2), c = 6.318(1)A, β = 90.06(1)°, and Z = 4. The crystal structure has been determined from three-dimensional Patterson and Fourier syntheses and refined by full-matrix least-square methods to an R-factor of 0.017 based on 1487 reflections, measured on an automatic single-crystal X-ray diffractometer. The absolute configuration and the hydrogen positions have been determined.

The structure of hilgardite is an open three-dimensional borate framework, whose building block is the anhydrous pentaborate polyanion $[B_5O_{12}]^{9-}$, consisting of three (BO_4) tetrahedra and two (BO_3) triangles. The average tetrahedral and triangular B–O distances are 1.474 and 1.363A respectively. The polyanions form three-tetrahedral-repeat single chains (6.3A c axis) by sharing tetrahedral corners with those belonging to adjacent polyanions. Within each chain, corners of two borate tetrahedra point along **+a** and **+b** directions, whereas corners of two borate triangles point along **−a** and **−b** directions; these corners are shared with four adjacent chains, such that tetrahedral corners of one chain are shared with triangular corners of the other. The resulting framework has ~6 and ~5A diameter open channels parallel to the a and c axes respectively. The water molecules and the chlorine atoms within the channels form quasi-linear hydrogen-bonded chains parallel to the c axis. Hilgardite may be the precursor of a new family of borate zeolites.

The calcium atoms occur within channels parallel to the a and b axes. The $[Ca(1)O_5Cl(H_2O)]$ and $[Ca(2)O_6Cl_2]$ coordination polyhedra are slightly distorted pentagonal and hexagonal bipyramids, with average Ca–O distances 2.465 and 2.535A, and average Ca–Cl distances 2.817 and 2.905A respectively. By sharing opposite Cl corners the Ca(2) polyhedra form linear chains parallel to the a axis, crosslinked into a sheet by the Ca(1) polyhedra sharing polyhedral corners and edges.

Hilgardite is mildly piezoelectric, the strongest electric axis being parallel to the a axis. The piezoelectricity along b is zero or nearly zero, because the borate triangles point alternately along **+b** and **−b**, whereas along the a axis, all borate triangles point along **−a**. All borate tetrahedra point along **−c**, the c axis presumably being the intermediate piezoelectric axis.

Introduction

The hydrated calcium chloroborate minerals hilgardite and parahilgardite were found in the insoluble residue from a brine well in the Choctow Salt Dome, Iberville Parish, Louisiana, in association with anhydrite, danburite, boracite, dolomite, magnesite, calcite, quartz, sulphur, and other minerals (Hurlbut and Taylor, 1937, 1938; Hurlbut, 1938). Hilgardite occurs as colorless hemimorphic triangular plates. It is monoclinic, crystal class m. The lack of a center of symmetry is clearly indicated by the morphology, further confirmed by positive tests for piezoelectricity (Hurlbut, 1938). The unit-cell dimensions were determined by Hurlbut and Taylor (1937), who suggested the space group to be Pc or Pm, and the chemical composition as $Ca_8(B_6O_{11})_3Cl_4 \cdot 4H_2O$, which implies a close relationship to colemanite, $Ca_2B_6O_{11} \cdot 5H_2O$. Braitsch (1959) confirmed the unit-cell dimensions and found the correct space group to be Cc. In addition, he described a new triclinic strontiohilgardite phase, whose unit-cell volume is one-fourth that of hilgardite; on this basis, he suggested the chemical composition of hilgardite and

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Hilgardite, $Ca_2[B_5O_9]Cl \cdot H_2O$.

A piezoelectric zeolite-type pentaborate

by

Subrata Ghose and Che'ng Wan

Table 3. Hilgardite: observed and calculated structure factors

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T H E

B*B            T*R    D*FILES*CELL        MODIFY*LOADAT*    *WT             T*T
 Y U          C E     A            *      *            L     T A           S R
  F P        J D      M SEMATICE*  D      D C*DATA*BOND* I    A N         I A
   R N      O A       P Y         T E     A R          E S     N A       L T
    Y A    R O        * M          E F    T Y          D T      G L     R S
     E B  P L         S T          X I    R L          I F       E *   * E
      * S* *          C R         T  N    D S          T C        N OZY R
       F C            A Y*BONDLA*  E      N Q*PHASE*EQN* *         *   *
       E R            L            *      *              A          S E
      R OB Y          E N*GRID  FC        R *SIGMA2*UIJ* T          P P
     U J  * S         * O      * *        E M          F O          E S
    O U    D E        D R       F R       M A          I M          C I
   F T      U T       U M        O E      A P          N *          I L
  * S        M *      M S         U F     R *          I E          A O
 S *          P B     C F          R I    K L          S N          L N
CAN            *IJ    OP*           R*N   *HK          H*D          *U*

S Y S T E M     VERSION OF JAN  1976     UPDATE OF 31MAY 76     U OF W  JAN 78  HWS

 WE TRAVEL NOT FOR TRAFFICKING ALONE
BY HOTTER WINDS OUR FIERY HEARTS ARE FANNED.
FOR LUST OF KNOWING WHAT SHOULD NOT BE KNOWN,
WE TAKE THE GOLDEN ROAD TO SAMARKAND.
               JAMES ELROY FLECKER - HASSAN.

   TIME        ELAPSED TIME   DATE
   .01 MIN        .01 MIN    02/21/78

-------------------------------------------------------------------------------------------------------------
                        ***************STORE REQUIREMENTS IN WORDS**************
CURRENT  PREVIOUS  CURRENT SIZE   REQUIRED SIZE  MAXIMUM SIZE OF    TOTAL CORE CURRENTLY   LARGEST AMOUNT
PROGRAM  PROGRAM   OF DATA ARRAY  OF DATA ARRAY  DATA ARRAY SO FAR       AVAILABLE         CORE USED SO FAR
LOADAT   SYSTEM      2000              1                1                 05510C               000001

   TIME        ELAPSED TIME   DATE
   .01 MIN        .00 MIN    02/21/78

LOADAT CARD INPUT


     IS THIS AN          INITIALIZE          TEMPERATURE      UPDATE POSITIONAL      TERMINATE ON
   A-PRIORI RUN          CONSTRAINTS         FACTOR TYPE     STANDARD DEVIATIONS     Q↑ABLE PARAM

        YES                 YES                 MIXD                NO                  YES


INPUT BINARY DATA FILE IS FOR HILGAR. IT HAS BEEN UPDATED    1 TIMES.
THE FILE IS LABELED - ( NO FILE LABEL                                                  )
THE PROGRAMS WHICH HAVE UPDATED AND/OR COPIED THIS FILE ARE..
 DATRDN
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CORRECTED SCALE FACTOR(S)

	NEW	OLD
1	.17280	1.00000

CURRENT EXTINCTION CORRECTION 0.

GRID SPECIFICATION-- X IN 34THS, Y IN 28THS, Z IN 19THS.

H	K	L	ST/L MIN	MAX
24	23	13	0.000	.985

20 ATOMS LOADED FROM CARDS SUCCESSFULLY.

ATOM		X	Y	Z	POPP	MULT	POSIT	U	U11	U22	U33	U12	U13	U23
CA	1	0.0000	.2502	0.0000	1.0000	1.0000	GENL		.0107	.0116	.0073	.0005	.0002	-.0007
CA	2	.2735	.4708	.8414	1.0000	1.0000	GENL		.0101	.0092	.0061	.0011	.0002	.0012
CL		.0239	.4917	.9005	1.0000	1.0000	GENL		.0122	.0123	.0202	-.0000	-.0017	-.0013
B	1	.2604	.1951	.6460	1.0000	1.0000	GENL		.0066	.0059	.0052	-.0001	.0002	.0008
B	2	.2710	.0280	.8833	1.0000	1.0000	GENL		.0090	.0060	.0067	-.0004	-.0002	-.0001
B	3	.2252	.3065	.3208	1.0000	1.0000	GENL		.0056	.0056	.0051	.0008	-.0002	.0005
B	4	.3361	.2296	.0083	1.0000	1.0000	GENL		.0061	.0060	.0047	-.0001	-.0001	.0005
B	5	.0602	.2573	.5415	1.0000	1.0000	GENL		.0051	.0084	.0071	.0007	-.0002	-.0005
O	1	.2668	.0652	.6779	1.0000	1.0000	GENL		.0160	.0055	.0061	-.0007	-.0016	.0009
O	2	.3458	.2565	.7813	1.0000	1.0000	GENL		.0069	.0076	.0047	-.0015	-.0012	.0002
O	3	.1411	.2367	.6981	1.0000	1.0000	GENL		.0052	.0139	.0069	.0023	-.0004	.0007
O	4	.2894	.2121	.4268	1.0000	1.0000	GENL		.0086	.0070	.0042	.0024	.0000	.0009
O	5	.2953	.1055	.0429	1.0000	1.0000	GENL		.0167	.0057	.0062	-.0025	-.0007	-.0001
O	6	.4494	.2436	.1134	1.0000	1.0000	GENL		.0048	.0164	.0069	-.0021	-.0003	-.0001
O	7	.2528	.3138	.0991	1.0000	1.0000	GENL		.0089	.0084	.0047	.0028	.0012	.0005
O	8	.2479	.4161	.4462	1.0000	1.0000	GENL		.0168	.0054	.0071	-.0027	-.0003	-.0001
O	9	.0949	.2834	.3389	1.0000	1.0000	GENL		.0058	.0132	.0067	-.0005	-.0004	.0026
O	10	.0101	.0492	.9092	1.0000	1.0000	GENL		.0282	.0132	.0239	.0025	.0044	.0036
H	1	.0356	.0273	.7867	1.0000	1.0000	GENL	.0473						
H	2	.0412	.4951	.5211	1.0000	1.0000	GENL	.0500						

LOGICAL RECORD 10, UPDATED.

DENSITY AND CHEMICAL ANALYSIS OMITTED FOR LACK OF ATOMIC WEIGHTS

LOGICAL RECORD 11, UPDATED.

LOGICAL RECORD 12, WRITTEN.

20 ATOMS LOADED.

***HYPER-PHYSICAL RECORD IN WHICH LOGICAL RECORDS BEGIN

LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY	LOG	HYPY
1	1	2	1	3	1	4	1	5	1	6	2	7	2	8	2	9	2	10	3	11	4
12	4	13	4	14	4	15	5	16	153	17	153	18	153	19	153	20	153	21	153	22	153
23	153	24	153	25	154																

INTERCHANGED NFILEA = 9 NFILEB = 8.

***************STORE REQUIREMENTS IN WORDS***************

CURRENT PROGRAM	PREVIOUS PROGRAM	CURRENT SIZE OF DATA ARRAY	REQUIRED SIZE OF DATA ARRAY	MAXIMUM SIZE OF DATA ARRAY SO FAR	TOTAL CORE CURRENTLY AVAILABLE	LARGEST AMOUNT CORE USED SO FAR
FC	LOADAT	2C00	272	272	047700	051524

TIME	ELAPSED TIME	DATE
.04 MIN	.03 MIN	02/21/78

FC CARD INPUT

TEMPERATURE FACTOR TYPE	LIST REFLECTIONS	DISPERSION CORRECTION	REFLECTION SURVEY	PARTIAL CONTRIBUTION	DIFFRACTION TYPE	UPDATE SCALE FACTORS
MIXD	YES	YES	NO	NO	XRAY	NO

INPUT BINARY DATA FILE IS FOR HILGAR. IT HAS BEEN UPDATED 2 TIMES.
THE FILE IS LABELED - (NO FILE LABEL)
THE PROGRAMS WHICH HAVE UPDATED AND/OR COPIED THIS FILE ARE..
DATRON LOADAT

ISOTROPIC EXTINCTION CORRECTION 0.

SIN(THETA)/LAMBDA RANGE		MAXIMUM H K L
0.000	.985	24 23 13

SCALE FACTORS
1 .17280

INDIVIDUAL ATOM PARAMETERS **** THERMAL VALUES LISTED ARE MULTIPLIED BY 100****

ATOM		X	Y	Z	POP. PAR.	MULT.	U OR U11	U22	U33	U12	U13	U23
CA	1	0.000000	.250230	0.000000	1.000000	1.000	1.07090	1.15730	.72960	.04660	.02430	-.06630
CA	2	.273460	.470810	.841440	1.000000	1.000	1.01060	.92070	.61090	.11050	.01590	.12420
CL		.023850	.491690	.900540	1.000000	1.000	1.21710	1.23450	2.02161	-.00380	-.17450	-.12570
B	1	.260440	.195120	.646030	1.000000	1.000	.66260	.59120	.51780	-.01170	.01590	.08220
B	2	.271010	.027970	.883310	1.000000	1.000	.90450	.60310	.66700	-.03710	-.02480	-.00680
B	3	.225230	.305470	.320750	1.000000	1.000	.55500	.55960	.51140	.07830	-.01680	.05490
B	4	.336070	.229600	.008310	1.000000	1.000	.61100	.59550	.47340	-.00940	-.00940	.04510
B	5	.060220	.257320	.541490	1.000000	1.000	.50550	.84290	.71330	.07060	-.02230	-.04820
O	1	.266840	.065180	.677890	1.000000	1.000	1.59831	.54640	.61160	-.06950	-.16390	.08980
O	2	.345780	.256540	.781280	1.000000	1.000	.69260	.76190	.47410	-.15290	-.12190	.02410
O	3	.141120	.236730	.698140	1.000000	1.000	.52150	1.39311	.69350	.22750	-.04340	.07370
O	4	.289430	.212080	.426760	1.000000	1.000	.85730	.70290	.42090	.24130	.00200	.08520
O	5	.295310	.105500	.042920	1.000000	1.000	1.67221	.57480	.61960	-.24980	-.07010	-.01350
O	6	.449370	.243630	.113420	1.000000	1.000	.47960	1.64261	.69330	-.20690	-.03000	-.00550
O	7	.252760	.313840	.099090	1.000000	1.000	.88650	.83700	.46970	.28360	.11590	.04610
O	8	.247910	.416090	.446210	1.000000	1.000	1.67651	.54480	.71360	-.26710	-.03170	-.00600

FC

INDIVIDUAL ATOM PARAMETERS **** THERMAL VALUES LISTED ARE MULTIPLIED BY 100****

ATOM		X	Y	Z	POP. PAR.	MULT.	U OR U11	U22	U33	U12	U13	U23
C	9	.094890	.283420	.338910	1.000000	1.000	.58450	1.31651	.67340	-.05280	-.04250	.26440
O	10	.010140	.049170	.909200	1.000000	1.000	2.82441	1.31811	2.38521	.24940	.44090	.36190
H	1	.035620	.027300	.786680	1.000000	1.000	4.73000					
H	2	.041200	.495080	.521080	1.000000	1.000	5.00000					

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
0	0	2	1	115.45	126.85	76.68	-101.05	.15829	-11.40	-46.15	308	
0	0	4	1	42.62	41.63	-41.23	5.71	.31658	.99	2.72	172	
0	0	6	1	46.36	46.73	41.80	20.90	.47487	-.37	-.77	26	
0	0	8	1	9.31	9.14	9.14	-.03	.63316	.17	.69	0	
0	1	1	1	34.21	32.53	-25.84	19.76	.09064	1.68	8.90	142	
0	1	3	1	91.82	93.90	90.92	23.44	.24151	-2.07	-6.67	14	
0	1	5	1	21.21	20.19	5.63	-19.40	.39818	1.01	5.13	287	
0	1	7	1	19.58	19.32	-19.22	1.90	.55578	.27	1.51	174	
0	1	9	1	13.86	13.61	9.04	10.17	.71368	.25	1.09	48	
0	2	0	1	72.83	74.29	-74.29	.46	.08836	-1.46	-7.96	179	
0	2	2	1	128.65	138.09	-36.60	-133.15	.18128	-9.44	-35.70	255	
0	2	4	1	93.30	94.80	-90.87	-27.04	.32868	-1.50	-4.08	197	
0	2	6	1	45.75	46.64	-26.83	38.15	.48302	-.89	-1.87	125	
0	2	8	1	20.65	20.65	-20.09	-4.76	.63930	.00	.01	194	
0	3	1	1	91.80	93.35	-40.50	84.11	.15437	-1.55	-6.35	115	
0	3	3	1	53.00	54.43	46.91	27.60	.27192	-1.43	-4.27	30	
0	3	5	1	53.76	51.62	-13.76	-49.75	.41733	2.14	4.97	255	
0	3	7	1	21.46	21.17	-21.11	1.56	.56965	.29	1.48	175	
0	3	9	1	21.06	20.30	20.21	1.99	.72453	.75	3.66	5	
0	4	2	1	83.62	83.90	17.72	-82.01	.23724	-.28	-.92	283	
0	4	4	1	18.15	17.04	-15.66	6.72	.36256	1.11	6.90	156	
0	4	6	1	39.41	39.13	34.96	17.57	.50669	.28	.80	26	
0	4	8	1	30.97	30.59	30.58	-.38	.65736	.39	1.38	0	
0	5	1	1	96.19	95.08	-92.69	21.16	.23465	1.11	3.62	167	
0	5	3	1	34.97	34.67	7.67	33.81	.32430	.30	1.14	77	
0	5	5	1	36.28	37.05	36.53	6.17	.45320	-.77	-2.34	9	
0	5	7	1	15.58	15.03	13.64	-6.31	.59643	.55	2.94	336	
0	5	9	1	8.05	7.89	6.54	-4.42	.74577	.16	.50	326	
0	6	0	1	83.42	79.60	-79.60	-.22	.26507	3.82	11.70	181	
0	6	2	1	73.27	73.07	-43.00	-59.07	.30874	.20	.56	234	
0	6	4	1	84.74	85.51	-85.25	6.70	.41290	-.77	-1.81	175	
0	6	6	1	34.08	34.06	-32.42	10.45	.54384	.02	.06	162	
0	6	8	1	10.65	10.71	-4.29	-9.81	.68641	-.06	-.23	247	
0	7	1	1	74.03	74.05	-39.94	62.36	.31922	-.02	-.06	122	
0	7	3	1	25.53	25.69	.95	25.67	.38989	-.16	-.75	87	
0	7	5	1	31.88	31.76	17.04	-26.80	.50223	.12	.40	303	
0	7	7	1	12.78	12.29	-10.33	6.66	.63449	.49	2.33	147	
0	8	0	1	62.37	62.71	62.68	1.79	.35343	-.33	-.86	1	
0	8	2	1	45.46	44.15	40.88	-16.68	.38726	1.31	3.15	338	
0	8	4	1	37.55	38.92	36.69	12.98	.47449	-1.36	-4.02	19	
0	8	6	1	25.65	25.40	10.98	22.91	.59196	.25	1.13	64	
0	8	8	1	35.20	34.69	31.19	15.18	.72513	.51	1.71	25	
0	9	1	1	26.92	27.92	-4.48	27.56	.40541	-.99	-4.49	99	
0	9	3	1	48.53	48.86	4.46	48.66	.46311	-.33	-.71	84	
0	9	5	1	34.48	34.75	27.80	20.86	.56098	-.27	-.99	36	
0	9	7	1	24.29	23.87	20.50	-12.23	.68193	.42	2.20	330	
0	10	0	1	18.76	17.71	-17.69	-.94	.44179	1.04	5.93	184	
0	10	2	1	20.60	20.96	-3.33	-20.69	.46929	-.36	-1.88	261	
0	10	4	1	42.42	42.80	-41.65	-9.86	.54351	-.38	-1.02	194	
0	10	6	1	35.31	34.99	-34.97	-.91	.64860	.32	1.05	182	
0	11	1	1	17.01	17.20	-17.06	-2.13	.49237	-.18	-1.18	188	
0	11	3	1	5.77	5.07	-3.29	3.86	.54087	.70	2.47	130	
0	11	5	1	31.87	32.02	32.00	1.05	.62671	-.15	-.54	1	
0	11	7	1	14.35	14.35	-6.85	-12.61	.73695	.00	.00	242	
0	12	0	1	30.08	30.59	30.58	.79	.53015	-.51	-1.94	1	
0	12	2	1	39.43	38.92	33.90	19.11	.55327	.51	1.66	29	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
0	12	4	1	37.48	37.58	34.69	-14.45	.61748	-.10	-.34	338	
0	12	6	1	5.27	5.27	-3.97	-3.47	.71173	-.00	-.01	222	
0	13	1	1	5.66	5.00	4.26	2.62	.57975	.66	2.08	31	
0	13	3	1	18.99	19.30	.25	19.30	.62147	-.31	-1.65	89	
0	13	5	1	7.33	8.05	4.02	6.98	.69746	-.73	-2.21	60	
0	14	0	1	38.02	38.51	-38.48	-1.44	.61851	-.48	-1.43	183	
0	14	2	1	14.57	14.81	-11.88	-8.85	.63844	-.24	-1.18	217	
0	14	4	1	42.39	42.95	-15.45	-40.07	.69482	-.56	-1.76	249	
0	15	1	1	26.67	27.61	-18.67	-20.34	.66739	-.94	-4.27	228	
0	15	3	1	18.13	19.35	-19.04	3.45	.70394	-1.22	-5.73	169	
0	16	0	1	17.38	17.63	17.63	.22	.70686	-.25	-1.14	0	
0	16	2	1	33.17	34.18	14.35	31.02	.72437	-1.01	-3.68	65	
0	17	-1	1	8.07	8.61	2.39	8.27	.75520	-.54	-1.57	73	
0	17	1	1	6.89	8.54	3.58	-7.76	.75520	-1.65	-4.17	295	
1	1	-9	1	24.58	25.08	-21.88	12.26	.71497	-.50	-2.29	150	
1	1	-7	1	20.80	20.51	-2.72	20.33	.55745	.29	1.41	97	
1	1	-5	1	39.26	38.76	-5.64	38.34	.40053	.50	1.18	98	
1	1	-3	1	148.18	162.18	-60.53	150.46	.24539	-13.99	-44.99	111	
1	1	-1	1	13.35	4.81	-3.38	3.41	.10060	8.54	66.82	134	
1	1	1	1	30.54	29.27	14.85	25.22	.10067	1.27	6.33	59	
1	1	3	1	15.87	16.09	12.26	10.42	.24548	-.22	-1.46	40	
1	1	5	1	22.36	21.85	21.84	-.55	.40062	.51	2.60	359	
1	1	7	1	29.55	29.05	-10.82	26.96	.55754	.50	1.82	111	
1	1	9	1	34.15	33.91	-24.93	22.99	.71506	.24	.81	137	
1	2	-8	1	27.76	28.41	-2.64	28.29	.64075	-.65	-2.56	95	
1	2	-6	1	14.87	15.00	-.35	14.99	.48495	-.12	-.76	91	
1	2	-4	1	33.00	32.20	-22.72	-22.82	.33153	.79	2.98	226	
1	2	-2	1	44.28	44.36	-14.38	41.97	.18644	-.09	-.32	108	
1	2	0	1	14.72	13.36	5.39	-12.23	.09858	1.36	9.06	294	
1	2	2	1	54.84	53.85	-2.73	-53.78	.18652	.99	3.64	268	
1	2	4	1	23.54	22.56	-7.36	21.32	.33162	.99	4.32	109	
1	2	6	1	22.06	21.57	3.68	-21.25	.48504	.49	2.59	280	
1	2	8	1	28.39	27.70	.14	-27.70	.64084	.69	2.75	271	
1	3	-9	1	23.65	24.21	23.06	-7.36	.72581	-.56	-2.75	343	
1	3	-7	1	30.62	30.43	-5.88	-29.86	.57128	.19	.67	259	
1	3	-5	1	13.08	13.64	.35	13.64	.41957	-.56	-3.75	88	
1	3	-3	1	95.93	100.04	30.79	-95.19	.27537	-4.11	-12.38	288	
1	3	-1	1	40.58	39.84	-26.77	-29.51	.16042	.74	2.93	228	
1	3	1	1	34.75	34.05	-17.45	29.24	.16046	.70	2.77	120	
1	3	3	1	63.01	62.77	22.79	-58.49	.27545	.24	.72	292	
1	3	5	1	79.65	81.21	4.73	-81.07	.41966	-1.55	-3.61	274	
1	3	7	1	33.43	34.31	-13.87	-31.38	.57137	-.88	-2.75	247	
1	3	9	1	22.95	23.04	17.99	-14.40	.72590	-.09	-.43	322	
1	4	-8	1	9.36	9.75	-6.43	7.32	.65877	-.38	-1.50	131	
1	4	-6	1	14.74	15.04	6.65	13.50	.50853	-.30	-1.85	63	
1	4	-4	1	7.59	7.81	4.29	6.53	.36515	-.22	-1.28	56	
1	4	-2	1	67.66	64.52	-13.74	63.04	.24121	3.14	10.14	102	
1	4	0	1	36.69	36.50	11.02	34.80	.18204	.19	.70	72	
1	4	2	1	71.27	67.93	42.40	-53.08	.24127	3.34	10.80	309	
1	4	4	1	30.65	30.86	-9.95	-29.21	.36523	-.20	-.71	252	
1	4	6	1	11.86	11.22	11.12	-1.51	.50861	.64	3.55	353	
1	4	8	1	9.50	9.73	5.34	-8.13	.65886	-.23	-.90	304	
1	5	-9	1	19.21	19.38	.38	19.37	.74701	-.17	-.78	88	
1	5	-7	1	15.84	15.63	-15.10	4.04	.59799	.21	1.14	165	
1	5	-5	1	42.17	41.85	-13.89	39.48	.45527	.32	.98	109	
1	5	-3	1	75.25	73.30	-13.58	72.03	.32720	1.95	5.31	100	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
1	5	-1	1	42.69	41.34	-20.20	-36.07	.23867	1.35	4.34	241	
1	5	1	1	115.81	116.95	13.02	116.23	.23870	-1.15	-3.74	83	
1	5	3	1	75.18	75.39	60.34	45.20	.32727	-.21	-.57	36	
1	5	5	1	18.83	18.88	6.91	-17.57	.45535	-.05	-.30	292	
1	5	7	1	47.15	47.12	-33.73	32.90	.59807	.03	.07	135	
1	5	9	1	20.03	19.49	-8.82	17.38	.74710	.53	2.51	116	
1	6	-8	1	27.72	28.46	-6.65	27.67	.68776	-.74	-3.03	103	
1	6	-6	1	23.81	24.28	23.41	-6.43	.54556	-.47	-2.24	345	
1	6	-4	1	64.50	64.75	-17.57	-62.32	.41517	-.26	-.59	255	
1	6	-2	1	30.92	30.33	-10.79	28.35	.31180	.59	2.25	110	
1	6	0	1	33.90	33.29	32.60	-6.74	.26865	.61	1.81	349	
1	6	2	1	45.18	43.49	-18.92	-39.16	.31184	1.69	4.67	245	
1	6	4	1	74.00	74.65	-12.71	73.56	.41524	-.65	-1.51	99	
1	6	6	1	20.42	20.60	20.29	3.56	.54564	-.17	-.93	9	
1	6	8	1	34.41	34.30	-4.52	-34.01	.68784	.11	.37	263	
1	7	-7	1	52.39	52.63	2.53	-52.57	.63595	-.24	-.57	273	
1	7	-5	1	12.53	12.73	7.68	-10.16	.50409	-.20	-1.17	308	
1	7	-3	1	76.82	76.90	36.26	-67.81	.39230	-.08	-.20	299	
1	7	-1	1	30.49	29.94	-17.23	-24.49	.32219	.54	2.04	235	
1	7	1	1	33.59	32.26	-23.10	22.51	.32221	1.33	4.99	135	
1	7	3	1	36.99	36.83	35.47	-9.94	.39236	.16	.54	345	
1	7	5	1	65.47	65.19	19.67	-62.15	.50417	.27	.56	288	
1	7	7	1	29.42	28.79	-24.10	-15.76	.63603	.62	2.27	214	
1	8	-8	1	15.70	16.58	-13.22	10.02	.72640	-.89	-3.95	142	
1	8	-6	1	21.75	21.93	21.81	-2.30	.59354	-.18	-.92	354	
1	8	-4	1	19.46	19.88	3.69	-19.54	.47647	-.42	-2.29	281	
1	8	-2	1	17.52	17.29	-9.72	14.29	.38970	.24	1.35	124	
1	8	0	1	52.10	51.53	47.38	20.25	.35612	.57	1.47	23	
1	8	2	1	5.62	4.34	3.53	-2.54	.38974	1.28	5.91	325	
1	8	4	1	33.43	32.40	-29.78	12.76	.47653	1.03	3.68	156	
1	8	6	1	36.70	36.03	23.17	27.59	.59361	.68	2.07	49	
1	8	8	1	11.32	11.73	3.33	-11.25	.72648	-.41	-1.57	287	
1	9	-7	1	14.56	14.35	-13.13	5.79	.68329	.22	1.00	156	
1	9	-5	1	23.65	23.23	-12.86	19.34	.56264	.43	1.83	123	
1	9	-3	1	27.01	26.36	22.61	13.55	.46514	.65	2.68	30	
1	9	-1	1	60.26	60.89	-54.74	-26.66	.40775	-.63	-1.48	206	
1	9	1	1	87.63	89.14	-30.00	83.94	.40777	-1.51	-3.58	109	
1	9	3	1	84.64	86.46	65.12	56.88	.46519	-1.82	-3.97	41	
1	9	5	1	11.01	10.97	-9.71	5.11	.56271	.04	.19	152	
1	9	7	1	40.67	40.51	-24.38	32.36	.68337	.15	.42	127	
1	10	-6	1	28.80	29.01	29.01	-.57	.65004	-.21	-.82	359	
1	10	-4	1	21.12	21.40	-14.56	-15.68	.54524	-.28	-1.38	228	
1	10	-2	1	23.94	24.10	-23.85	3.46	.47131	-.16	-.71	171	
1	10	0	1	18.60	18.62	6.68	-17.38	.44395	-.02	-.09	292	
1	10	2	1	57.54	57.51	-44.18	-36.81	.47134	.03	.07	220	
1	10	4	1	36.36	35.67	-18.70	30.38	.54529	.69	2.23	121	
1	10	6	1	36.34	36.83	33.67	14.91	.65010	-.49	-1.59	23	
1	11	-7	1	23.60	24.13	-3.19	-23.92	.73821	-.53	-2.45	263	
1	11	-5	1	13.66	13.44	-13.07	-3.12	.62820	.22	1.08	194	
1	11	-3	1	36.89	37.71	17.61	-33.34	.54261	-.82	-2.67	298	
1	11	-1	1	22.30	24.29	-17.74	-16.59	.49430	-.99	-4.30	224	
1	11	1	1	26.98	27.44	-24.92	-11.47	.49432	-.45	-1.80	205	
1	11	3	1	23.51	23.52	19.42	-13.26	.54265	-.01	-.03	326	
1	11	5	1	60.32	59.18	6.35	-58.84	.62826	1.14	1.97	277	
1	11	7	1	39.23	38.97	-19.94	-33.48	.73828	.26	.78	240	
1	12	-6	1	18.56	18.67	13.57	12.83	.71304	-.11	-.53	43	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
1	12	-4	1	4.03	1.57	.01	1.57	.61900	2.46	5.37	89	
1	12	-2	1	11.48	10.99	-1.98	10.81	.55499	.49	2.49	100	
1	12	0	1	33.96	33.57	32.55	-8.22	.53195	.39	1.27	346	
1	12	2	1	25.03	25.17	-22.42	-11.45	.55501	-.14	-.67	208	
1	12	4	1	28.90	29.48	-28.48	7.62	.61905	-.59	-2.38	165	
1	12	6	1	27.64	27.94	23.35	15.36	.71310	-.31	-1.35	33	
1	13	-5	1	24.63	25.86	1.81	25.79	.69880	-1.22	-5.66	85	
1	13	-3	1	25.19	24.59	14.28	20.01	.62299	.61	2.82	54	
1	13	-1	1	35.30	35.90	-35.89	-.18	.58139	-.59	-1.83	181	
1	13	1	1	40.76	42.00	-20.01	36.92	.58141	-1.24	-3.85	118	
1	13	3	1	45.25	45.13	40.25	20.40	.62302	.12	.29	26	
1	13	5	1 L	2.99	1.10	-.64	.89	.69885	1.89	2.73	125	
1	14	-4	1	13.85	13.65	-3.15	13.28	.69617	.20	.88	103	
1	14	-2	1	7.53	7.31	6.37	-3.57	.63992	.22	.73	331	
1	14	0	1	21.66	21.64	13.58	-16.85	.62005	.02	.09	309	
1	14	2	1	31.80	31.81	-14.88	-28.11	.63995	-.01	-.04	243	
1	14	4	1	14.87	14.70	-14.44	2.72	.69621	.17	.77	169	
1	15	-3	1	24.04	24.51	13.05	-20.75	.70528	-.47	-2.39	303	
1	15	-1	1	14.32	14.52	8.78	-11.57	.66882	-.21	-.92	308	
1	15	1	1	9.70	10.51	7.13	-7.72	.66883	-.81	-3.02	313	
1	15	3	1	17.27	17.63	12.02	-12.89	.70531	-.36	-1.70	313	
1	16	-2	1	25.16	25.44	23.71	9.20	.72568	-.27	-1.21	21	
1	16	0	1	16.73	17.36	12.03	-12.51	.70821	-.63	-2.86	314	
1	16	2	1	8.50	9.34	-9.20	-1.62	.72570	-.84	-2.62	191	
1	17	-1	1	12.07	11.93	-1.08	11.88	.75646	.14	.52	95	
1	17	1	1	29.13	29.03	8.40	27.79	.75647	.10	.40	73	
2	0	-8	1	52.51	53.84	38.99	-37.13	.63908	-1.33	-3.20	317	
2	0	-6	1	6.89	8.36	1.83	[illegible]	.48276	-1.47	-6.33	283	
2	0	-4	1	28.99	29.17	19.45	21.74	.32834	-.18	-.67	48	
2	0	-2	1	71.24	74.06	73.86	-5.39	.18075	-2.82	-10.67	356	
2	0	0	1	70.59	71.35	-66.98	-24.58	.08743	-.77	-4.22	201	
2	0	2	1	98.23	100.64	97.89	-23.35	.18091	-2.40	-9.09	347	
2	0	4	1	75.65	74.19	66.15	-33.60	.32852	1.46	3.94	334	
2	0	6	1	39.27	38.78	-37.37	10.36	.48294	.49	1.43	164	
2	0	8	1	54.68	53.38	49.58	19.80	.63926	1.29	3.13	21	
2	1	-9	1	29.20	29.50	-29.09	4.92	.71892	-.30	-1.24	170	
2	1	-7	1	35.94	36.51	10.17	35.06	.56252	-.56	-1.80	73	
2	1	-5	1	36.05	35.26	34.36	-7.89	.40758	.80	2.62	348	
2	1	-3	1	82.33	82.31	-66.79	-48.10	.25676	.02	.07	216	
2	1	-1	1	28.24	27.91	-24.26	-13.81	.12588	.33	1.46	210	
2	1	1	1	7.79	7.40	6.20	4.04	.12599	.39	4.17	33	
2	1	3	1	71.08	70.78	-70.74	2.37	.25693	.31	.95	178	
2	1	5	1	40.72	39.53	25.14	30.50	.40776	1.19	2.80	50	
2	1	7	1	44.15	43.95	39.74	-18.76	.56270	.20	.53	335	
2	1	9	1	32.69	32.83	-18.00	-27.46	.71910	-.14	-.51	237	
2	2	-8	1	22.39	22.83	3.25	-22.60	.64516	-.44	-2.17	279	
2	2	-6	1	103.27	108.70	-106.62	-21.16	.49078	-5.43	-11.34	192	
2	2	-4	1	73.27	73.17	-47.84	55.37	.34002	.10	.26	130	
2	2	-2	1	53.63	53.33	-22.47	48.36	.20119	.30	1.07	114	
2	2	0	1	54.30	51.46	-51.35	-3.37	.12430	2.84	13.04	184	
2	2	2	1	24.00	24.15	-22.88	7.73	.20133	-.15	-.74	161	
2	2	4	1	50.27	49.64	-27.15	-41.56	.34019	.63	1.65	237	
2	2	6	1	68.02	68.26	-53.94	-41.83	.49096	-.24	-.50	218	
2	2	8	1	66.59	66.16	-42.45	50.74	.64534	.43	.74	129	
2	3	-9	1	35.50	36.35	-35.71	6.81	.72970	-.85	-2.83	169	
2	3	-7	1	33.46	33.60	16.14	29.47	.57623	-.14	-.44	61	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
2	3	-5	1	61.19	62.65	59.03	-20.99	.42631	-1.46	-3.35	341	
2	3	-3	1	14.68	15.09	-3.63	-14.65	.28556	-.41	-3.07	257	
2	3	-1	1	20.82	20.41	-6.43	19.37	.17737	.41	2.10	108	
2	3	1	1	65.24	63.12	-52.48	-35.07	.17745	2.12	8.07	214	
2	3	3	1	37.33	37.54	-30.26	22.21	.28571	-.21	-.60	143	
2	3	5	1	65.95	67.09	45.47	49.34	.42648	-1.14	-2.62	47	
2	3	7	1	30.03	29.00	24.04	-16.21	.57641	1.03	4.10	327	
2	3	9	1	28.50	28.23	-23.68	-15.36	.72988	.27	1.10	213	
2	4	-8	1	40.91	42.69	24.80	-34.75	.66306	-1.78	-5.06	306	
2	4	-6	1	17.96	18.33	17.57	-5.22	.51409	-.37	-2.12	344	
2	4	-4	1	27.05	26.80	16.10	21.43	.37288	.24	1.01	53	
2	4	-2	1	110.47	110.17	109.39	-13.12	.25278	.30	.95	354	
2	4	0	1	92.70	91.68	91.42	6.88	.19716	1.02	3.68	4	
2	4	2	1	98.80	99.14	94.74	29.22	.25290	-.34	-1.08	17	
2	4	4	1	52.01	50.53	45.40	-22.17	.37303	1.48	3.71	334	
2	4	6	1	34.59	34.64	-34.22	5.37	.51426	-.05	-.15	171	
2	4	8	1	25.14	24.80	21.10	13.04	.66324	.34	1.48	31	
2	5	-9	1	23.88	24.31	-21.72	-10.93	.75079	-.44	-2.03	207	
2	5	-7	1	31.15	31.26	-5.61	30.76	.60272	-.11	-.40	100	
2	5	-5	1	22.10	21.62	21.62	-.25	.46148	.48	2.38	0	
2	5	-3	1	42.08	42.14	10.50	-40.79	.33581	-.06	-.16	285	
2	5	-1	1	20.74	18.08	15.77	8.84	.25037	2.67	13.65	29	
2	5	1	1	78.42	74.13	71.36	20.09	.25043	4.29	13.56	15	
2	5	3	1	24.75	25.86	-14.66	21.31	.33594	-1.11	-4.91	124	
2	5	5	1	16.24	15.76	-8.39	13.35	.46164	.48	3.07	122	
2	5	7	1	30.82	30.02	17.18	-24.61	.60289	.80	2.77	305	
2	5	9	1	33.49	33.17	-25.50	-21.22	.75097	.31	1.01	220	
2	6	-8	1	23.84	24.66	-16.32	-18.49	.69187	-.82	-3.61	229	
2	6	-6	1	60.58	61.62	-57.41	-22.39	.55075	-1.04	-1.99	202	
2	6	-4	1	48.86	48.76	-8.24	48.06	.42199	.10	.22	99	
2	6	-2	1	43.05	42.60	-26.87	33.06	.32083	.45	1.22	129	
2	6	0	1	32.29	32.10	-26.79	17.69	.27912	.19	.56	146	
2	6	2	1	28.39	27.52	-21.36	-17.35	.32092	.87	3.25	220	
2	6	4	1	49.87	50.14	-20.51	-45.75	.42212	-.27	-.62	246	
2	6	6	1	31.84	31.10	-30.90	-3.51	.55091	.74	2.36	187	
2	6	8	1	57.18	56.71	-45.54	33.79	.69204	.47	1.07	143	
2	7	-7	1	33.11	33.54	9.68	32.12	.64040	-.44	-1.44	73	
2	7	-5	1	30.24	30.30	29.96	-4.53	.50971	-.06	-.20	352	
2	7	-3	1	36.03	36.76	34.03	-13.89	.39952	-.73	-2.40	318	
2	7	-1	1	15.09	14.64	-11.47	-9.09	.33095	.44	2.99	[illegible]	
2	7	1	1	66.86	67.82	-64.93	-19.58	.33100	-.95	-2.56	197	
2	7	3	1	38.68	39.80	12.64	37.73	.39962	-1.12	-2.61	71	
2	7	5	1	37.41	38.26	28.55	25.46	.50986	-.85	-2.38	41	
2	7	7	1	26.17	25.37	12.20	-22.24	.64056	.80	3.37	299	
2	8	-8	1	19.10	19.43	16.71	-9.92	.73030	-.33	-1.57	330	
2	8	-6	1	31.72	30.93	30.18	6.75	.59831	.79	2.74	12	
2	8	-4	1	26.84	27.11	-24.76	11.03	.48241	-.26	-1.06	155	
2	8	-2	1	44.54	43.78	43.35	-6.06	.39697	.76	1.83	353	
2	8	0	1	95.92	95.71	95.70	-1.45	.36408	.21	.54	0	
2	8	2	1	42.46	41.61	39.30	13.67	.39704	.85	1.99	19	
2	8	4	1	28.08	27.05	17.41	-20.69	.48253	1.04	4.23	311	
2	8	6	1	9.31	8.48	.00	-8.48	.59845	.83	3.51	271	
2	8	8	1	15.28	15.44	15.35	-1.63	.73046	-.16	-.67	354	
2	9	-7	1	20.51	20.04	-9.83	17.46	.68744	.47	2.30	119	
2	9	-5	1	12.66	12.29	11.97	2.78	.56768	.37	1.88	13	
2	9	-3	1	22.26	23.00	10.80	-20.31	.47124	-.75	-3.32	299	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
2	9	-1	1	51.60	52.59	-50.36	-15.14	.41471	-.99	-2.29	197	
2	9	1	1	17.03	17.89	-15.82	-8.36	.41475	-.87	-5.39	208	
2	9	3	1	11.25	10.80	2.17	10.58	.47134	.45	2.60	78	
2	9	5	1	13.22	12.56	11.81	-4.29	.56781	.66	3.47	341	
2	9	7	1	22.35	21.97	11.92	-18.46	.68759	.38	1.94	303	
2	10	-6	1	29.26	28.90	-25.01	-14.48	.65440	.36	1.27	211	
2	10	-4	1	21.35	20.89	-20.80	-1.95	.55044	.46	2.25	186	
2	10	-2	1	65.72	66.20	-64.63	14.32	.47733	-.48	-1.02	167	
2	10	0	1	41.90	42.48	-41.14	10.55	.45036	-.58	-1.77	165	
2	10	2	1	52.80	52.20	-33.68	-39.89	.47740	.60	1.27	230	
2	10	4	1	42.16	41.82	-37.76	-17.97	.55055	.35	.93	206	
2	10	6	1	16.42	16.32	-3.23	15.99	.65453	.11	.52	101	
2	11	-7	1	11.46	11.06	8.08	7.54	.74205	.41	1.54	43	
2	11	-5	1	14.01	14.17	-.23	14.17	.63272	-.16	-.79	90	
2	11	-3	1	29.72	30.14	17.75	-24.36	.54785	-.43	-1.56	307	
2	11	-1	1	45.08	45.27	-15.37	-42.58	.50006	-.19	-.39	251	
2	11	1	1	60.31	61.87	-55.50	27.34	.50009	-1.55	-3.17	153	
2	11	3	1	38.96	39.57	12.57	37.53	.54793	-.61	-1.63	71	
2	11	5	1	11.85	12.05	12.05	-.02	.63284	-.21	-.93	0	
2	11	7	1	8.79	8.85	8.59	-2.12	.74219	-.06	-.20	347	
2	12	-6	1	35.19	35.68	34.02	-10.77	.71702	-.49	-1.66	343	
2	12	-4	1	17.78	17.93	-13.37	-11.95	.62359	-.15	-.80	222	
2	12	-2	1	34.85	34.54	19.88	28.24	.56011	.31	.99	54	
2	12	0	1	57.97	58.05	57.69	6.49	.53731	-.08	-.16	6	
2	12	2	1	30.50	30.76	29.41	-9.04	.56016	-.26	-.95	343	
2	12	4	1	9.46	9.14	6.58	6.35	.62368	.32	1.32	43	
2	12	6	1	13.90	14.30	10.22	10.01	.71714	-.41	-1.73	44	
2	13	-5	1	14.46	14.41	14.30	-1.77	.70287	.05	.20	353	
2	13	-3	1	23.24	23.62	20.84	-11.12	.62756	-.38	-1.93	332	
2	13	-1	1	36.29	36.73	-25.31	-26.62	.58630	-.44	-1.35	227	
2	13	1	1	26.10	25.77	-23.63	10.29	.58632	.33	1.38	156	
2	13	3	1	25.23	25.85	2.78	25.70	.62763	-.62	-2.85	83	
2	13	5	1	17.82	18.46	18.45	-.69	.70297	-.64	-2.98	358	
2	14	-4	1	41.04	41.12	-23.20	-33.95	.70026	-.08	-.21	236	
2	14	-2	1	43.22	43.46	-38.91	19.37	.64438	-.24	-.58	153	
2	14	0	1	17.94	17.82	7.20	16.30	.62465	.12	.62	66	
2	14	2	1	36.36	36.58	-14.31	-33.66	.64442	-.22	-.72	247	
2	14	4	1	53.31	53.50	-51.41	14.81	.70034	-.19	-.43	163	
2	15	-3	1	18.34	18.69	18.66	-1.05	.70931	-.35	-1.62	357	
2	15	-1	1	27.55	28.02	8.19	-26.79	.67309	-.47	-1.88	287	
2	15	1	1	38.81	39.38	-21.31	33.12	.67311	-.57	-1.84	122	
2	15	3	1	22.99	22.99	19.04	12.89	.70938	-.00	-.01	34	
2	16	-2	1	49.27	48.54	19.84	44.30	.72961	.73	1.95	65	
2	16	0	1	42.69	43.79	42.83	9.12	.71225	-1.10	-2.93	12	
2	16	2	1	44.63	44.91	36.08	-26.73	.72965	-.27	-.71	324	
3	1	-9	1	39.33	40.20	-7.08	39.58	.72549	-.87	-2.62	100	
3	1	-7	1	22.65	22.61	11.19	19.65	.57090	.04	.20	60	
3	1	-5	1	28.36	28.58	18.70	21.62	.41909	-.22	-.85	49	
3	1	-3	1	11.10	11.58	1.97	11.41	.27470	-.48	-4.01	80	
3	1	-1	1	84.37	87.59	-27.79	83.06	.15935	-3.21	-13.00	108	
3	1	1	1	80.24	82.46	24.82	78.64	.15948	-2.22	-8.99	72	
3	1	3	1	52.63	51.69	-11.03	50.50	.27494	.95	2.84	102	
3	1	5	1	110.24	112.63	-6.71	112.43	.41935	-2.38	-5.56	93	
3	1	7	1	25.48	25.93	-3.76	25.66	.57117	-.45	-1.94	98	
3	1	9	1	12.81	12.62	.77	12.59	.72576	.19	.78	86	
3	2	-8	1	28.83	29.33	11.74	-26.88	.65248	-.51	-1.98	294	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
3	2	-6	1	19.89	20.47	7.25	-19.15	.50038	-.58	-3.48	291	
3	2	-4	1	15.62	15.27	2.67	15.03	.35375	.35	2.38	79	
3	2	-2	1	5.08	3.80	-3.78	.34	.22365	1.28	8.83	174	
3	2	0	1	37.83	36.13	-6.26	35.58	.15813	1.70	6.78	99	
3	2	2	1	47.74	46.26	-4.94	46.00	.22384	1.48	4.95	96	
3	2	4	1	12.74	12.36	9.78	-7.55	.35400	.38	2.86	323	
3	2	6	1	12.33	12.27	-1.02	12.23	.50064	.07	.38	94	
3	2	8	1	20.24	20.07	-8.42	18.21	.65274	.18	.88	114	
3	3	-9	1	41.28	41.65	13.81	-39.30	.73617	-.38	-1.13	290	
3	3	-7	1	16.22	16.22	12.05	-10.87	.58442	-.00	-.02	318	
3	3	-5	1	86.42	88.13	1.60	-88.11	.43733	-1.71	-3.87	272	
3	3	-3	1	57.73	59.04	-22.02	-54.78	.30179	-1.31	-3.73	249	
3	3	-1	1	21.60	20.07	-14.41	13.97	.20250	1.53	7.27	135	
3	3	1	1	46.20	45.38	15.06	-42.81	.20261	.82	2.88	290	
3	3	3	1	11.22	10.36	6.55	-6.02	.30200	.87	7.16	310	
3	3	5	1	60.24	60.96	-22.09	-56.82	.43757	-.72	-1.62	249	
3	3	7	1	37.23	36.62	17.03	-32.42	.58468	.61	1.90	298	
3	3	9	1	23.25	23.14	-3.60	-22.86	.73644	.11	.52	262	
3	4	-8	1	15.11	15.78	11.76	-10.53	.67018	-.67	-3.11	319	
3	4	-6	1	21.73	21.49	-11.00	-18.47	.52326	.24	1.16	240	
3	4	-4	1	10.64	10.51	-4.42	9.54	.38544	.12	.83	114	
3	4	-2	1	75.68	73.67	21.79	-70.37	.27100	2.01	6.09	288	
3	4	0	1	22.93	22.39	-22.38	-.63	.22006	.55	2.51	182	
3	4	2	1	81.30	78.71	-31.24	72.24	.27116	2.60	7.87	113	
3	4	4	1	20.15	19.26	18.44	5.57	.38566	.89	4.97	16	
3	4	6	1	19.18	19.20	-18.87	-3.54	.52351	-.02	-.10	191	
3	4	8	1	11.53	11.46	-5.23	10.19	.67044	.07	.32	117	
3	5	-9	1	35.44	35.63	-19.98	29.50	.75709	-.19	-.63	124	
3	5	-7	1	36.84	37.96	25.55	28.07	.61055	-1.12	-3.36	47	
3	5	-5	1	24.56	24.59	24.40	-3.05	.47168	-.03	-.14	353	
3	5	-3	1	51.47	51.49	-47.15	20.70	.34972	-.03	-.07	156	
3	5	-1	1	130.49	131.27	-51.92	120.57	.26876	-.78	-2.39	113	
3	5	1	1	48.63	48.43	37.19	31.03	.26885	.20	.60	39	
3	5	3	1	6.80	6.39	-3.26	5.50	.34990	.41	2.38	120	
3	5	5	1	88.80	88.77	8.99	88.32	.47191	.02	.05	84	
3	5	7	1	21.57	21.53	13.12	17.08	.61080	.03	.17	52	
3	5	9	1	23.00	22.91	-13.15	18.75	.75734	.09	.44	125	
3	6	-8	1	26.69	27.75	12.44	-24.80	.69870	-1.06	-4.51	297	
3	6	-6	1	22.47	22.94	-22.20	-5.79	.55932	-.47	-2.35	195	
3	6	-4	1	45.76	45.33	-16.25	42.31	.43313	.43	.98	111	
3	6	-2	1	10.41	10.21	.13	10.21	.33537	.20	1.43	89	
3	6	0	1	15.77	15.18	-13.56	-6.82	.29574	.60	3.83	207	
3	6	2	1	22.30	21.44	13.19	16.91	.33550	.86	4.36	52	
3	6	4	1	45.19	44.65	23.00	-38.27	.43333	.55	1.23	302	
3	6	6	1	10.43	10.37	-5.46	-8.82	.55955	.05	.25	239	
3	6	8	1	28.67	28.27	-6.23	27.58	.69895	.39	1.59	102	
3	7	-7	1	20.23	20.02	3.87	19.64	.64778	.21	1.10	78	
3	7	-5	1	66.36	67.58	-.86	-67.57	.51897	-1.22	-2.43	270	
3	7	-3	1	75.10	74.68	-50.36	-55.14	.41127	.41	.97	228	
3	7	-1	1	9.41	8.69	-6.01	6.27	.34508	.72	5.05	133	
3	7	1	1	69.43	68.97	44.88	-52.37	.34514	.46	1.21	311	
3	7	3	1	52.36	51.03	-6.12	-50.66	.41143	1.33	3.11	264	
3	7	5	1	48.60	49.18	-24.63	-42.57	.51918	-.58	-1.15	240	
3	7	7	1	47.85	47.67	27.04	-39.26	.64801	.17	.41	305	
3	8	-8	1	15.17	15.73	10.00	-12.14	.73677	-.56	-2.40	310	
3	8	-6	1	34.02	34.54	-34.52	-1.25	.60621	-.52	-1.56	183	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
3	8	-4	1	42.56	42.70	3.49	42.56	.49219	-.14	-.40	85	
3	8	-2	1	54.42	52.84	37.47	-37.26	.40881	1.58	3.73	316	
3	8	0	1	49.43	48.17	-37.36	-30.41	.37698	1.26	3.10	220	
3	8	2	1	12.99	12.25	-9.03	8.28	.40891	.74	4.97	137	
3	8	4	1	37.22	36.83	26.29	-25.80	.49236	.39	1.11	316	
3	8	6	1	28.78	28.62	-21.19	-19.24	.60642	.15	.58	223	
3	8	8	1	18.35	18.09	3.90	17.66	.73701	.26	1.21	77	
3	9	-7	1	29.14	30.20	20.53	22.14	.69432	-1.06	-3.89	47	
3	9	-5	1	25.08	24.61	20.68	13.35	.57601	.46	1.98	32	
3	9	-3	1	58.25	58.01	-50.10	29.23	.48125	.24	.51	149	
3	9	-1	1	81.22	80.71	-1.86	80.69	.42607	.51	1.17	91	
3	9	1	1	57.19	57.53	50.94	26.74	.42612	-.34	-.79	27	
3	9	3	1	21.50	21.55	-7.51	-20.20	.48139	-.05	-.25	250	
3	9	5	1	46.61	45.10	17.77	41.46	.57619	1.51	3.92	66	
3	9	7	1	16.36	16.08	4.75	15.36	.69453	.28	1.33	72	
3	10	-6	1	32.89	32.74	-32.67	2.23	.66163	.14	.51	176	
3	10	-4	1	23.98	23.69	4.90	23.18	.55903	.29	1.36	78	
3	10	-2	1	45.05	45.90	39.66	23.09	.48723	-.84	-1.73	30	
3	10	0	1	24.67	24.51	3.66	-24.24	.46064	.15	.63	279	
3	10	2	1	19.88	20.31	15.97	12.55	.48731	-.43	-2.30	38	
3	10	4	1	7.84	7.88	5.77	5.37	.55918	-.05	-.19	42	
3	10	6	1	30.20	29.53	-26.92	-12.13	.66182	.67	2.40	205	
3	11	-7	1	17.56	17.23	15.98	6.44	.74843	.33	1.43	21	
3	11	-5	1	56.30	56.34	26.84	-49.54	.64020	-.03	-.06	299	
3	11	-3	1	48.38	48.26	-28.88	-38.66	.55648	.12	.31	234	
3	11	-1	1	12.50	12.07	10.63	5.71	.50951	.43	2.43	28	
3	11	1	1	34.85	34.63	27.40	-21.18	.50956	.22	.76	323	
3	11	3	1	39.22	39.09	-21.79	-32.46	.55660	.13	.35	237	
3	11	5	1	19.27	19.00	-15.11	-11.52	.64037	.27	1.42	218	
3	11	7	1	21.42	22.01	16.15	-14.95	.74863	-.58	-2.73	318	
3	12	-6	1	23.30	23.46	-22.71	-5.87	.72362	-.16	-.79	195	
3	12	-4	1	36.01	36.69	15.43	33.28	.63118	-.68	-1.97	65	
3	12	-2	1	42.96	43.01	38.69	-18.81	.56857	-.06	-.15	335	
3	12	0	1	24.41	24.33	-20.47	-13.15	.54613	.08	.35	213	
3	12	2	1	10.48	10.28	-9.34	4.30	.56864	.20	.97	155	
3	12	4	1	7.61	7.61	1.32	-7.50	.63132	.00	.01	281	
3	12	6	1	17.51	16.64	-16.64	-.19	.72380	.87	4.03	181	
3	13	-5	1	9.64	9.38	6.71	6.55	.70961	.26	.94	44	
3	13	-3	1	23.12	23.05	-21.50	8.32	.63511	.07	.31	158	
3	13	-1	1	37.76	38.19	-1.55	38.16	.59438	-.43	-1.32	92	
3	13	1	1	47.82	47.65	27.31	39.05	.59442	.17	.44	55	
3	13	3	1	8.74	8.53	-2.38	8.20	.63521	.21	.81	106	
3	13	5	1	31.91	31.49	1.42	31.46	.70976	.42	1.66	87	
3	14	-4	1	9.93	10.61	9.49	4.75	.70702	-.68	-2.45	26	
3	14	-2	1	23.71	23.79	20.81	11.53	.65174	-.08	-.33	28	
3	14	0	1	29.12	29.56	-7.74	-28.53	.63226	-.44	-1.63	255	
3	14	2	1	10.15	10.69	-9.70	4.50	.65180	-.55	-2.15	155	
3	14	4	1	24.19	24.25	-2.84	24.08	.70715	-.06	-.27	96	
3	15	-3	1	36.23	36.36	-25.26	-26.15	.71600	-.13	-.39	226	
3	15	-1	1	10.94	10.20	-8.99	-4.82	.68014	.74	2.99	209	
3	15	1	1	22.06	22.25	-6.54	-21.27	.68017	-.19	-.99	253	
3	15	3	1	21.87	22.10	-14.96	-16.27	.71609	-.23	-1.10	228	
3	16	-2	1	18.07	17.78	6.93	-16.37	.73612	.29	1.33	293	
3	16	0	1	8.46	8.48	2.31	-8.15	.71893	-.02	-.05	286	
3	16	2	1	18.94	19.22	-15.96	-10.72	.73617	-.29	-1.30	214	
4	0	-8	1	32.11	31.61	31.57	-1.39	.65669	.51	1.84	358	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
4	0	-6	1	48.15	48.88	48.55	5.71	.50587	-.73	-1.46	6	
4	0	-4	1	23.63	23.60	-23.32	3.64	.36150	.03	.12	171	
4	0	-2	1	84.80	87.62	16.62	86.04	.23574	-2.83	-9.24	79	
4	0	4	1	63.29	64.26	-57.49	-28.72	.36182	-.97	-2.47	207	
4	0	6	1	15.66	15.79	-7.13	14.09	.50621	-.14	-.82	116	
4	0	8	1	7.61	8.17	1.81	-7.97	.65704	-.56	-1.92	283	
4	1	-9	1	12.68	13.06	13.02	1.01	.73461	-.38	-1.54	4	
4	1	-7	1	15.42	15.40	-11.75	-9.95	.58246	.03	.15	221	
4	1	-5	1	29.28	28.91	-3.62	28.68	.43472	.37	1.40	97	
4	1	-3	1	95.74	98.63	91.43	36.99	.29802	-2.89	-8.32	22	
4	1	-1	1	39.55	39.26	6.17	-38.77	.19688	.29	1.04	280	
4	1	1	1	60.88	60.76	-60.60	-4.49	.19702	.11	.40	185	
4	1	3	1	61.71	61.12	35.53	49.73	.29831	.59	1.69	54	
4	1	5	1	18.34	17.46	6.42	-16.24	.43505	.88	4.71	292	
4	1	7	1	25.98	25.81	-25.03	-6.31	.58281	.17	.64	195	
4	1	9	1	14.74	14.91	5.70	13.78	.73496	-.17	-.76	67	
4	2	-8	1	42.28	42.24	-41.91	5.21	.66260	.04	.12	172	
4	2	-6	1	29.13	30.55	1.00	-30.53	.51353	-1.42	-5.53	272	
4	2	-4	1	73.71	74.83	-64.82	-37.39	.37214	-1.12	-2.80	210	
4	2	-2	1	117.74	123.13	-89.94	84.10	.25175	-5.39	-17.05	136	
4	2	0	1	99.07	99.71	88.51	45.91	.19591	-.64	-2.31	27	
4	2	2	1	131.75	133.81	-70.34	-113.83	.25198	-2.06	-6.51	239	
4	2	4	1	80.98	80.68	-56.55	-57.55	.37245	.30	.75	226	
4	2	6	1	44.52	44.56	-24.19	37.42	.51387	-.03	-.07	122	
4	2	8	1	10.72	10.82	-10.67	1.81	.66295	-.10	-.42	170	
4	3	-9	1	19.05	19.20	18.56	4.92	.74516	-.16	-.72	14	
4	3	-7	1	12.53	12.80	-9.05	-9.05	.59571	-.27	-1.35	225	
4	3	-5	1	44.61	44.81	-38.51	22.92	.45232	-.20	-.44	149	
4	3	-3	1	41.34	42.49	42.28	-4.27	.32315	-1.16	-3.11	355	
4	3	-1	1	71.69	71.29	13.05	-70.09	.23318	.40	1.32	281	
4	3	1	1	38.48	38.55	-35.61	14.76	.23331	-.07	-.23	157	
4	3	3	1	51.27	51.63	19.46	47.82	.32342	-.36	-.97	67	
4	3	5	1	31.39	29.55	14.08	-25.98	.45264	1.84	6.84	299	
4	3	7	1	15.28	15.35	-.32	-15.34	.59605	-.06	-.33	269	
4	3	9	1	12.31	12.09	7.81	9.23	.74551	.22	.87	49	
4	4	-8	1	37.47	37.15	36.99	3.39	.68005	.33	1.04	5	
4	4	-6	1	32.44	32.52	31.99	-5.85	.53585	-.09	-.28	350	
4	4	-4	1	15.96	16.26	-12.66	-10.20	.40238	-.30	-1.89	219	
4	4	-2	1	56.82	56.50	-18.69	53.32	.29462	.32	.91	109	
4	4	0	1	97.18	97.73	78.94	57.62	.24860	-.55	-1.76	36	
4	4	2	1	145.17	148.74	136.32	-59.49	.29481	-3.56	-10.37	337	
4	4	4	1	25.69	25.51	-22.60	-11.85	.40267	.18	.71	208	
4	4	6	1	22.04	21.74	10.77	18.88	.53617	.31	1.47	60	
4	4	8	1	25.79	25.25	25.25	.17	.68039	.54	2.46	0	
4	5	-7	1	8.38	7.98	-7.91	-1.06	.62137	.40	1.57	188	
4	5	-5	1	30.95	31.75	22.66	22.24	.48562	-.80	-2.79	44	
4	5	-3	1	25.01	26.13	23.35	-11.74	.36832	-1.13	-4.69	334	
4	5	-1	1	92.45	91.35	-48.61	-77.34	.29258	1.10	3.19	238	
4	5	1	1	99.42	98.14	-98.07	-3.76	.29268	1.28	3.71	183	
4	5	3	1	31.39	31.12	.12	31.12	.36855	.27	.93	89	
4	5	5	1	37.01	36.37	34.70	10.89	.48591	.65	1.88	17	
4	5	7	1	13.93	13.77	-3.43	13.33	.62170	.16	.80	104	
4	6	-8	1	25.25	25.46	-23.26	10.37	.70817	-.21	-.97	155	
4	6	-6	1	31.28	31.95	-24.42	-20.60	.57111	-.67	-2.38	221	
4	6	-4	1	88.87	90.26	-71.65	-54.89	.44827	-1.39	-3.10	218	
4	6	-2	1	78.41	78.52	-74.88	23.65	.35473	-.11	-.29	162	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
4	6	0	1	15.11	15.43	11.67	10.10	.31755	-.33	-2.12	40	
4	6	2	1	60.65	59.22	-46.98	-36.04	.35490	1.43	3.66	218	
4	6	4	1	44.33	44.06	-38.67	-21.13	.44853	.27	.57	209	
4	6	6	1	24.49	24.19	-23.98	3.17	.57141	.30	1.28	172	
4	6	8	1	10.09	9.41	3.18	8.85	.70849	.68	2.57	70	
4	7	-7	1	9.88	9.66	5.88	-7.67	.65798	.21	.85	308	
4	7	-5	1	7.99	8.37	-6.45	5.33	.53166	-.38	-1.65	140	
4	7	-3	1	24.22	24.34	10.27	-22.07	.42720	-.12	-.57	295	
4	7	-1	1	43.84	42.78	-.71	-42.77	.36393	1.07	2.70	270	
4	7	1	1	37.94	38.30	-34.15	17.34	.36401	-.37	-.91	153	
4	7	3	1	33.57	32.96	-8.98	31.72	.42740	.61	1.93	105	
4	7	5	1	33.52	33.57	33.55	-1.12	.53193	-.04	-.14	359	
4	7	7	1	21.12	20.58	17.07	-11.49	.55829	.54	2.83	327	
4	8	-8	1	42.67	43.29	43.17	-3.28	.74575	-.62	-1.59	356	
4	8	-6	1	31.64	30.98	25.03	-18.25	.61710	.66	2.48	324	
4	8	-4	1	35.67	35.80	35.47	4.86	.50556	-.14	-.38	7	
4	8	-2	1	45.73	44.85	23.06	38.47	.42464	.88	2.00	59	
4	8	0	1	20.26	19.41	2.68	19.23	.39432	.84	4.21	82	
4	8	2	1	79.36	78.93	76.97	-17.49	.42497	.43	.99	348	
4	8	4	1	14.39	14.68	3.34	14.30	.50579	-.29	-1.73	76	
4	8	6	1	16.51	16.09	.03	16.09	.61738	.42	2.21	89	
4	8	8	1	18.10	18.56	18.28	3.21	.74607	-.47	-2.08	9	
4	9	-7	1	14.51	14.34	-1.39	14.27	.70385	.17	.75	95	
4	9	-5	1	45.87	45.87	38.24	25.35	.58747	.00	.00	33	
4	9	-3	1	29.42	29.65	15.54	-25.26	.49493	-.23	-.81	302	
4	9	-1	1	35.23	34.47	-2.44	-34.38	.44148	.76	2.34	266	
4	9	1	1	46.81	46.90	-32.27	34.03	.44154	-.09	-.19	133	
4	9	3	1	42.52	43.49	-25.53	35.20	.49511	-.97	-2.79	125	
4	9	5	1	23.29	23.29	4.96	22.76	.58772	-.00	-.02	77	
4	9	7	1	6.87	6.06	-2.03	5.71	.70413	.81	2.40	109	
4	10	-6	1	31.20	31.35	-30.20	-8.39	.67163	-.15	-.52	196	
4	10	-4	1	39.59	39.42	-38.38	-8.99	.57084	.17	.44	194	
4	10	-2	1	24.64	25.05	-20.07	14.99	.50075	-.40	-1.74	143	
4	10	0	1	14.58	14.37	2.49	14.15	.47513	.21	1.29	80	
4	10	2	1	23.99	24.00	-21.76	10.12	.50086	-.01	-.05	155	
4	10	4	1	27.14	26.62	-12.08	-23.72	.57104	.52	2.07	244	
4	10	6	1	43.45	43.30	-38.59	-19.64	.67188	.15	.42	207	
4	11	-7	1	15.69	15.25	2.54	15.04	.75728	.44	1.85	80	
4	11	-5	1	23.99	23.89	22.71	-7.42	.65053	.10	.47	342	
4	11	-3	1	19.92	19.34	18.50	-5.64	.56836	.58	3.23	344	
4	11	-1	1	4.28	5.06	-4.06	3.01	.52247	-.78	-2.06	143	
4	11	1	1	22.61	22.95	-10.22	-20.55	.52252	-.34	-1.52	244	
4	11	3	1	6.72	6.29	-4.31	4.59	.56851	.43	1.53	133	
4	11	5	1	28.76	29.16	26.20	12.80	.65076	-.40	-1.54	26	
4	12	-6	1	11.84	11.97	10.25	-6.17	.73278	-.12	-.46	329	
4	12	-4	1	32.92	32.28	20.22	25.17	.64167	.64	2.09	51	
4	12	-2	1	41.89	41.36	41.32	1.85	.58020	.54	1.36	2	
4	12	0	1	17.36	17.72	16.41	-6.70	.55824	-.37	-2.12	338	
4	12	2	1	37.83	37.35	36.96	5.37	.58030	.48	1.51	8	
4	12	4	1	20.56	20.37	20.29	-1.81	.64185	.18	.97	355	
4	12	6	1	8.31	7.68	1.94	-7.43	.73301	.63	2.00	285	
4	13	-5	1	25.18	25.22	17.61	18.06	.71894	-.04	-.19	45	
4	13	-3	1	20.88	20.71	-5.96	-19.84	.64553	.17	.90	254	
4	13	-1	1	9.94	9.51	-4.13	-8.57	.60552	.44	1.85	245	
4	13	1	1	8.89	6.77	2.50	6.29	.60557	2.11	8.44	68	
4	13	3	1	17.34	17.75	-16.04	7.61	.64567	-.41	-2.07	154	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
4	13	5	1	14.19	14.32	-4.90	13.46	.71914	-.14	-.58	110	
4	14	-4	1	33.81	34.08	-27.13	20.63	.71640	-.28	-.92	142	
4	14	-2	1	17.50	17.54	-17.26	-3.10	.66191	-.03	-.17	191	
4	14	0	1	26.92	27.02	-26.89	-2.64	.64275	-.09	-.40	186	
4	14	2	1	17.72	17.26	-16.49	5.10	.66199	.46	2.28	162	
4	14	4	1	40.82	41.33	15.92	-38.13	.71636	-.50	-1.32	293	
4	15	-3	1	19.94	19.54	6.85	-18.30	.72527	.40	1.85	291	
4	15	-1	1	17.60	17.82	-17.21	4.63	.68990	-.22	-1.04	164	
4	15	1	1	29.40	29.84	-.77	-29.83	.68994	-.44	-1.76	269	
4	15	3	1	5.71	5.72	-4.27	-3.80	.72539	-.00	-.01	222	
4	16	-2	1	35.64	35.78	31.73	-16.54	.74514	-.14	-.44	333	
4	16	0	1	21.16	21.28	17.54	-12.04	.72817	-.12	-.57	326	
4	16	2	1	23.24	23.22	9.05	21.38	.74521	.02	.09	67	
5	1	-9	1	11.73	10.94	-10.63	-2.58	.74618	.79	3.02	194	
5	1	-7	1	6.46	7.12	1.42	6.97	.59700	-.66	-2.25	78	
5	1	-5	1	34.67	34.78	13.30	32.14	.45403	-.11	-.34	67	
5	1	-3	1	33.05	32.41	-9.83	30.89	.32556	.64	2.42	107	
5	1	-1	1	115.48	118.16	-4.69	118.07	.23654	-2.68	-8.80	92	
5	1	1	1	17.05	18.15	7.27	16.63	.23669	-1.10	-6.72	66	
5	1	3	1	51.17	50.26	45.32	21.73	.32589	.91	2.48	25	
5	1	5	1	38.69	39.09	36.92	12.84	.45443	-.40	-1.22	19	
5	1	7	1	32.82	31.51	-3.35	31.33	.59742	1.32	4.59	96	
5	1	9	1	33.60	33.71	-11.54	31.67	.74661	-.11	-.35	110	
5	2	-8	1	29.46	29.46	-17.61	23.61	.67541	.00	.01	126	
5	2	-6	1	12.03	11.92	-4.19	11.16	.52997	.10	.56	110	
5	2	-4	1	25.59	25.52	3.50	-25.28	.39453	.07	.29	278	
5	2	-2	1	13.01	12.74	-12.33	3.22	.28383	.27	1.95	165	
5	2	0	1	31.25	30.14	25.95	-15.33	.23575	1.11	3.54	330	
5	2	2	1	54.18	52.25	36.02	-37.85	.28409	1.93	5.67	314	
5	2	4	1	11.16	11.00	-10.73	2.41	.39490	.16	1.10	167	
5	2	6	1	3.81	3.12	3.12	-.17	.53038	.68	1.80	357	
5	2	8	1	15.79	15.80	10.45	-11.85	.67584	-.01	-.07	312	
5	3	-9	1	12.10	12.00	4.01	11.31	.75657	.10	.36	70	
5	3	-7	1	22.08	22.10	-4.06	-21.72	.60993	-.02	-.10	260	
5	3	-5	1	32.66	33.50	-33.00	-5.76	.47091	-.83	-2.99	190	
5	3	-3	1	20.25	20.71	-4.48	-20.21	.34872	-.45	-2.19	258	
5	3	-1	1	149.23	153.42	15.75	-152.61	.26752	-4.19	-12.83	276	
5	3	1	1	18.87	18.43	-18.40	1.00	.26765	.43	2.47	176	
5	3	3	1	41.31	40.46	3.42	-40.32	.34903	.85	2.19	275	
5	3	5	1	64.69	64.24	15.54	-62.33	.47129	.45	.96	285	
5	3	7	1	39.92	39.14	-16.23	-35.62	.61035	.78	2.36	246	
5	3	9	1	17.41	16.75	1.53	-16.68	.75700	.66	2.89	276	
5	4	-8	1	7.02	7.04	-6.94	-1.17	.69253	-.03	-.08	190	
5	4	-6	1	13.99	14.08	-3.74	13.58	.55162	-.09	-.50	105	
5	4	-4	1	11.24	10.73	-7.55	-7.62	.42318	.52	3.29	226	
5	4	-2	1	47.70	47.88	-25.72	40.39	.32246	-.19	-.50	122	
5	4	0	1	19.63	19.80	.91	19.78	.28107	-.16	-.92	87	
5	4	2	1	54.86	53.36	35.06	-40.22	.32269	1.51	4.11	312	
5	4	4	1	11.21	11.13	-4.58	-10.15	.42352	.08	.50	246	
5	4	6	1	13.26	12.97	11.39	-6.20	.55201	.29	1.56	332	
5	4	8	1	10.29	10.36	7.53	-7.12	.69295	-.08	-.30	317	
5	5	-7	1	7.59	6.68	-1.80	-6.44	.63502	.90	3.21	255	
5	5	-5	1	37.60	37.82	-1.54	37.79	.50298	-.23	-.64	92	
5	5	-3	1	31.96	30.50	21.40	21.74	.39094	1.46	4.90	45	
5	5	-1	1	51.77	50.19	5.70	49.87	.32061	1.58	4.32	83	
5	5	1	1	67.99	67.05	-23.27	62.89	.32073	.94	2.57	110	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
5	5	3	1	78.68	78.94	47.24	63.24	.39122	-.26	-.63	53	
5	5	5	1	29.91	30.38	30.37	.34	.50333	-.47	-1.58	0	
5	5	7	1	34.93	34.44	-29.32	18.06	.63542	.50	1.66	148	
5	6	-8	1	31.09	30.69	-21.59	21.81	.72017	.40	1.57	134	
5	6	-6	1	27.04	28.03	26.66	8.67	.58594	-.99	-3.64	18	
5	6	-4	1	48.68	48.71	30.24	-38.19	.46703	-.C3	-.07	309	
5	6	-2	1	25.42	24.52	-21.09	12.51	.37818	.90	3.69	149	
5	6	0	1	36.66	35.84	29.11	20.90	.34356	.83	2.14	35	
5	6	2	1	34.15	33.57	16.62	-29.17	.37837	.57	1.95	300	
5	6	4	1	47.90	47.09	-42.48	20.31	.46734	.81	1.74	154	
5	6	6	1	30.01	30.36	5.03	29.95	.58631	-.36	-1.24	80	
5	6	8	1	26.42	26.67	14.42	-22.43	.72057	-.24	-1.05	303	
5	7	-7	1	43.58	43.61	19.74	-38.89	.67089	-.C3	-.09	297	
5	7	-5	1	21.25	21.12	-14.11	-15.71	.54756	.14	.67	229	
5	7	-3	1	8.77	7.73	5.71	-5.21	.44685	1.04	5.55	318	
5	7	-1	1	83.93	82.34	-12.77	-81.34	.38683	1.60	3.92	262	
5	7	1	1	55.32	54.87	-49.19	24.31	.38692	.45	1.10	153	
5	7	3	1	9.47	8.31	7.87	2.69	.44709	1.15	6.53	18	
5	7	5	1	64.42	63.26	24.29	-58.41	.54789	1.16	2.22	293	
5	7	7	1	41.43	39.88	-22.35	-33.02	.67126	1.55	4.38	236	
5	8	-8	1	6.19	6.29	-6.11	-1.49	.75716	-.10	-.25	194	
5	8	-6	1	15.96	15.85	10.29	12.06	.63085	.11	.58	49	
5	8	-4	1	24.78	24.41	-14.83	-19.39	.52227	.38	1.71	233	
5	8	-2	1	32.41	31.77	-23.65	21.21	.44460	.63	1.93	138	
5	8	0	1	36.19	35.53	15.32	32.06	.41555	.66	2.13	64	
5	8	2	1	13.61	13.20	-8.41	-10.17	.44476	.42	2.67	231	
5	8	4	1	35.77	34.74	-30.37	16.86	.52255	1.03	2.83	150	
5	8	6	1	11.75	10.78	5.13	9.47	.63119	.97	4.40	61	
5	9	-7	1	8.89	7.78	-5.80	-5.19	.71592	1.11	3.78	222	
5	9	-5	1	22.43	22.01	-7.29	20.77	.60190	.42	1.94	109	
5	9	-3	1	43.36	43.63	41.05	14.80	.51199	-.27	-.77	19	
5	9	-1	1	20.22	20.59	-18.26	9.51	.46054	-.37	-1.93	152	
5	9	1	1	59.60	60.11	-47.84	36.39	.46061	-.51	-1.10	142	
5	9	3	1	87.81	88.66	34.76	81.57	.51220	-.86	-1.74	66	
5	9	5	1	19.93	19.63	13.84	13.93	.60220	.30	1.53	45	
5	9	7	1	27.10	27.52	-24.90	11.71	.71628	-.42	-1.62	154	
5	10	-6	1	27.44	28.08	27.40	6.15	.68428	-.63	-2.54	12	
5	10	-4	1	21.99	21.61	18.19	-11.67	.58569	.38	1.88	328	
5	10	-2	1	24.07	24.05	-21.43	-10.91	.51762	.03	.12	207	
5	10	0	1	24.02	23.12	21.45	8.63	.49290	.90	3.93	21	
5	10	2	1	34.76	34.38	-1.98	-34.32	.51776	.39	1.30	267	
5	10	4	1	29.55	29.99	-29.11	-7.22	.58593	-.44	-1.52	194	
5	10	6	1	56.33	56.21	27.62	48.96	.68459	.12	.28	60	
5	11	-5	1	31.56	30.70	-24.15	-18.96	.66359	.86	3.04	219	
5	11	-3	1	17.17	17.71	1.54	-17.64	.58327	-.54	-2.97	275	
5	11	-1	1	60.00	60.76	-18.30	-57.94	.53867	-.75	-1.46	253	
5	11	1	1	22.75	22.46	-22.00	-4.51	.53874	.29	1.41	192	
5	11	3	1	23.53	23.38	23.18	-3.06	.58346	.15	.73	353	
5	11	5	1	53.69	52.81	18.83	-49.33	.66387	.88	2.06	291	
5	12	-6	1	22.39	21.77	-4.41	21.32	.74439	.61	2.74	101	
5	12	-4	1	22.97	23.04	-20.94	-9.61	.65491	-.07	-.36	205	
5	12	-2	1	9.93	9.74	-7.64	6.05	.59482	.18	.80	141	
5	12	0	1	25.16	25.19	24.63	-5.29	.57343	-.03	-.11	348	
5	12	2	1	30.31	30.25	-12.96	-27.33	.59494	.06	.21	245	
5	12	4	1	22.76	22.76	-20.08	10.72	.65513	.00	.01	151	
5	12	6	1	7.88	7.89	2.35	7.54	.74460	-.01	-.03	72	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
5	13	-5	1	22.15	22.15	-1.58	22.10	.73078	-.01	-.03	94	
5	13	-3	1	34.43	34.56	25.80	23.00	.65870	-.13	-.42	41	
5	13	-1	1	10.01	8.81	-7.14	5.16	.61956	1.20	5.19	144	
5	13	1	1	29.69	30.24	-29.89	4.62	.61961	-.55	-2.05	171	
5	13	3	1	49.65	48.88	20.69	44.28	.65887	.78	1.81	64	
5	13	5	1	20.97	20.50	19.49	6.35	.73103	.48	2.24	18	
5	14	-4	1	18.82	18.29	11.21	14.45	.72829	.54	2.45	52	
5	14	-2	1	10.95	10.26	9.62	-3.58	.67476	.69	2.78	340	
5	14	0	1	25.85	26.27	26.26	-.47	.65599	-.42	-1.85	359	
5	14	2	1	22.96	21.88	5.52	-21.17	.67487	1.08	5.64	285	
5	14	4	1	24.96	24.69	-17.14	-17.78	.72848	.27	1.13	227	
5	15	-3	1	20.21	19.94	8.44	-18.07	.73701	.27	1.25	296	
5	15	-1	1	26.46	26.59	-2.94	-26.42	.70225	-.13	-.53	264	
5	15	1	1	7.67	7.34	6.26	3.83	.70230	.33	1.04	31	
5	15	3	1	19.38	20.45	15.45	-13.40	.73716	-1.07	-4.84	320	
5	16	-2	1	20.66	20.34	11.88	16.52	.75658	.31	1.41	54	
5	16	0	1	10.57	10.30	6.63	-7.88	.73988	.28	.99	311	
5	16	2	1	20.59	20.76	-10.55	-17.88	.75667	-.17	-.78	240	
6	0	-8	1	64.65	64.70	59.17	-26.17	.68508	-.04	-.07	337	
6	0	-6	1	40.25	40.84	-10.79	-39.39	.54225	-.59	-1.57	255	
6	0	-4	1	77.49	78.75	59.11	52.04	.41090	-1.26	-2.97	41	
6	0	-2	1	41.27	41.48	30.50	28.11	.30620	-.20	-.57	42	
6	0	0	1	72.37	68.88	-1.36	-68.87	.26228	3.49	10.73	269	
6	0	2	1	72.21	73.16	72.92	5.92	.30649	-.94	-2.66	4	
6	0	4	1	84.72	83.96	83.89	-3.26	.41132	.77	1.81	358	
6	0	6	1	19.54	19.70	1.44	-19.64	.54273	-.15	-.76	275	
6	0	8	1	42.66	42.55	2.67	42.47	.68559	.11	.30	86	
6	1	-7	1	29.02	28.35	-12.22	25.58	.61431	.67	2.76	115	
6	1	-5	1	28.65	28.13	25.33	12.23	.47658	.52	2.14	25	
6	1	-3	1	59.20	59.30	-21.10	-55.42	.35635	-.10	-.25	250	
6	1	-1	1	16.70	16.74	-6.45	-15.45	.27742	-.04	-.23	248	
6	1	1	1	14.45	13.38	11.58	6.69	.27758	1.08	7.59	30	
6	1	3	1	37.40	37.85	-35.73	-12.47	.35672	-.44	-1.12	200	
6	1	5	1	43.98	43.52	8.46	42.69	.47703	.46	.97	78	
6	1	7	1	43.31	43.27	42.83	6.19	.61480	.04	.11	8	
6	2	-8	1	7.49	7.43	-2.52	-6.99	.69076	.06	.19	251	
6	2	-6	1	70.52	71.44	-60.61	-37.82	.54940	-.92	-1.77	212	
6	2	-4	1	112.93	116.92	-116.19	-13.09	.42029	-4.00	-9.29	187	
6	2	-2	1	18.74	19.18	-1.31	19.14	.31869	-.44	-2.50	93	
6	2	0	1	50.12	50.15	-45.71	20.64	.27676	-.04	-.11	155	
6	2	2	1	35.96	34.42	-20.97	27.30	.31897	1.53	4.16	127	
6	2	4	1	24.72	24.00	-10.50	-21.58	.42071	.72	3.23	245	
6	2	6	1	63.50	62.83	-46.07	-42.72	.54987	.67	1.28	223	
6	2	8	1	33.37	34.24	-31.66	13.04	.69126	-.87	-3.03	157	
6	3	-7	1	35.71	35.15	-10.87	33.43	.62689	.56	1.88	108	
6	3	-5	1	53.44	54.27	54.03	5.04	.49269	-.82	-1.69	5	
6	3	-3	1	12.42	12.54	6.49	-10.73	.37763	-.12	-.87	302	
6	3	-1	1	22.49	21.81	-14.38	16.40	.30426	.68	3.18	131	
6	3	1	1	40.71	39.17	-7.51	-38.45	.30441	1.53	4.29	259	
6	3	3	1	52.30	52.22	-50.70	-12.49	.37797	.08	.20	194	
6	3	5	1	46.52	46.93	6.66	46.46	.49313	-.41	-.84	81	
6	3	7	1	28.60	28.55	28.33	3.56	.62737	.05	.19	7	
6	4	-8	1	57.03	56.90	53.79	-18.55	.70751	.12	.28	341	
6	4	-6	1	21.30	21.30	12.74	-17.07	.57032	-.01	-.03	307	
6	4	-4	1	69.49	70.49	46.78	52.73	.44729	-1.00	-2.22	48	
6	4	-2	1	54.83	54.74	43.38	33.39	.35354	.09	.23	37	

FC

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
6	4	0	1		58.25	58.09	57.21	-10.06	.31626	.17	.46	351	
6	4	2	1		53.76	53.83	47.41	25.49	.35378	-.07	-.17	28	
6	4	4	1		54.68	52.65	51.31	-11.82	.44768	2.03	4.48	348	
6	4	6	1		29.90	28.69	-6.90	-27.85	.57077	1.21	4.32	257	
6	4	8	1		26.25	25.64	-13.44	21.84	.70800	.61	2.55	121	
6	5	-7	1		22.69	22.76	-5.20	22.16	.65132	-.08	-.41	103	
6	5	-5	1		32.47	32.88	15.37	29.07	.52342	-.41	-1.36	62	
6	5	-3	1		32.98	33.29	27.79	-18.32	.41693	-.31	-.99	327	
6	5	-1	1		6.98	6.58	6.17	-2.30	.35186	.40	2.30	340	
6	5	1	1		28.33	27.52	4.52	27.14	.35198	.82	2.90	80	
6	5	3	1		17.72	17.14	-6.97	15.66	.41724	.58	3.45	113	
6	5	5	1		20.39	20.22	-14.47	14.12	.52383	.16	.84	135	
6	5	7	1		28.16	27.58	22.26	-16.29	.65178	.58	2.25	324	
6	6	-8	1		21.65	21.34	-18.38	-10.83	.73458	.31	1.48	211	
6	6	-6	1		34.22	34.21	-29.02	-18.12	.60357	.01	.04	212	
6	6	-4	1		58.60	58.80	-57.52	12.19	.48898	-.20	-.41	168	
6	6	-2	1		17.15	16.97	-3.84	16.53	.40500	.18	1.06	103	
6	6	0	1		49.59	49.71	-40.23	29.21	.37290	-.13	-.31	144	
6	6	2	1		23.08	23.14	-22.74	-4.29	.40521	-.06	-.26	191	
6	6	4	1		42.24	42.18	-12.99	-40.13	.48934	.06	.17	253	
6	6	6	1		42.51	42.69	-41.56	-9.76	.60400	-.18	-.44	194	
6	6	8	1		34.92	34.60	-34.44	3.24	.73505	.32	1.07	174	
6	7	-7	1		42.14	41.27	-19.93	36.14	.68634	.87	2.40	118	
6	7	-5	1		30.72	30.92	30.79	2.81	.56640	-.20	-.71	5	
6	7	-3	1		29.25	29.31	28.83	-5.32	.46976	-.06	-.23	350	
6	7	-1	1		16.20	15.63	-10.47	-11.60	.41310	.58	3.59	228	
6	7	1	1		45.19	45.34	-12.35	-43.62	.41320	-.15	-.35	255	
6	7	3	1		35.35	36.03	-33.80	12.49	.47004	-.68	-2.01	159	
6	7	5	1		24.47	24.01	1.11	23.98	.56678	.46	1.97	87	
6	7	7	1		20.42	20.00	18.99	-6.27	.68678	.42	2.10	342	
6	8	-6	1		26.35	26.44	26.36	-2.00	.64726	-.09	-.37	356	
6	8	-4	1		6.83	6.50	3.93	5.18	.54199	.32	1.22	52	
6	8	-2	1		7.21	6.17	4.35	4.37	.46763	1.04	4.90	45	
6	8	0	1		77.99	78.95	78.20	10.89	.44012	-.96	-2.17	7	
6	8	2	1		37.00	37.02	36.21	7.66	.46781	-.02	-.06	11	
6	8	4	1		35.57	34.61	32.01	-13.15	.54231	.97	3.14	338	
6	8	6	1		23.33	22.94	16.79	-15.64	.64786	.39	1.91	318	
6	9	-7	1	L	2.88	1.08	-.11	1.07	.73042	1.80	2.34	95	
6	9	-5	1		9.41	9.38	1.96	9.17	.61909	.03	.12	77	
6	9	-3	1		27.22	26.88	26.56	-4.14	.53210	.34	1.26	352	
6	9	-1	1		34.00	34.02	-12.52	-31.63	.48281	-.02	-.05	249	
6	9	1	1		35.08	35.23	-33.64	-10.47	.48290	-.15	-.43	198	
6	9	3	1		32.98	32.85	23.29	23.16	.53234	.14	.44	44	
6	9	5	1		20.22	19.94	17.06	10.33	.61944	.28	1.48	31	
6	9	7	1		17.05	16.36	14.59	-7.40	.73084	.69	3.13	334	
6	10	-6	1		21.90	21.84	-18.27	-11.98	.69944	.06	.29	214	
6	10	-4	1		41.13	40.15	-35.12	-19.47	.60334	.98	2.43	209	
6	10	-2	1		31.73	31.15	-29.57	-9.81	.53753	.58	1.87	199	
6	10	0	1		38.80	38.17	-36.43	11.41	.51378	.63	1.75	162	
6	10	2	1		19.77	19.53	-7.44	-18.06	.53769	.24	1.27	248	
6	10	4	1		29.93	30.29	-20.36	-22.43	.60363	-.37	-1.39	228	
6	10	6	1		28.25	28.32	-20.75	19.27	.69981	-.07	-.27	137	
6	11	-5	1		7.35	6.99	-4.64	5.22	.67922	.36	1.15	131	
6	11	-3	1		26.38	25.83	13.79	-21.84	.60100	.54	2.25	303	
6	11	-1	1		41.51	40.69	-5.46	-40.32	.55783	.82	2.18	263	
6	11	1	1		21.87	22.22	-22.21	-.86	.55791	-.35	-1.72	183	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
6	11	3	1	37.69	37.83	-24.38	28.93	.60122	-.14	-.41	130	
6	11	5	1	10.13	10.31	9.08	4.89	.67954	-.19	-.71	28	
6	12	-4	1	24.08	23.56	10.29	-21.19	.67074	.52	2.39	296	
6	12	-2	1	35.78	35.44	-26.46	23.58	.61222	.34	1.00	138	
6	12	0	1	52.15	51.85	41.74	30.76	.59148	.30	.55	36	
6	12	2	1	37.97	37.90	35.88	-12.20	.61236	.08	.23	342	
6	12	4	1	7.53	6.55	6.52	.71	.67100	.97	3.24	6	
6	13	-5	1	8.11	8.10	4.68	6.61	.74500	.01	.04	54	
6	13	-3	1	27.95	27.40	22.36	15.85	.67445	.55	2.27	35	
6	13	-1	1	21.39	21.76	2.67	-21.60	.63629	-.37	-1.82	278	
6	13	1	1	46.65	46.94	-46.94	-.71	.63636	-.29	-.69	181	
6	13	3	1	27.95	28.37	9.79	26.63	.67465	-.43	-1.73	69	
6	13	5	1	18.74	19.23	17.32	8.34	.74529	-.49	-2.17	25	
6	14	-4	1	33.94	34.01	-21.48	-26.37	.74256	-.08	-.27	231	
6	14	-2	1	24.18	24.21	-22.77	8.21	.69015	-.03	-.15	160	
6	14	0	1	21.55	21.61	-7.70	20.19	.67182	-.07	-.34	110	
6	14	2	1	7.35	7.09	.12	-7.08	.69028	.27	.83	271	
6	14	4	1	41.80	42.95	-42.35	-7.11	.74279	-1.15	-2.96	190	
6	15	-3	1	10.93	11.31	10.54	4.09	.75112	-.38	-1.34	21	
6	15	-1	1	23.83	24.11	7.37	-22.95	.71705	-.27	-1.28	288	
6	15	1	1	23.88	24.05	-18.32	15.57	.71711	-.17	-.78	139	
6	15	3	1	20.77	20.60	-11.18	17.31	.75130	.17	.78	122	
6	16	0	1	40.58	40.71	27.21	30.28	.75395	-.13	-.38	48	
7	1	-7	1	42.66	41.59	-21.19	35.78	.63416	1.07	2.59	120	
7	1	-5	1	16.89	17.31	15.77	7.15	.50193	-.42	-2.61	24	
7	1	-3	1	48.90	48.98	33.18	36.03	.38962	-.08	-.19	47	
7	1	-1	1	55.07	54.69	-35.48	41.62	.31906	.38	1.04	130	
7	1	1	1	62.22	62.43	-13.56	60.94	.31921	-.21	-.59	102	
7	1	3	1	38.10	37.68	-4.15	37.45	.39001	.42	1.02	96	
7	1	5	1	49.59	51.03	-45.21	23.67	.50243	-1.44	-2.92	152	
7	1	7	1	39.08	39.04	4.50	38.78	.63472	.04	.11	83	
7	2	-8	1	28.53	28.74	18.07	-22.35	.70847	-.21	-.84	309	
7	2	-6	1	12.46	12.70	6.58	-10.86	.57152	-.24	-1.19	302	
7	2	-4	1	17.65	17.70	-6.47	16.47	.44884	-.04	-.27	111	
7	2	-2	1	10.78	10.35	-8.87	-5.34	.35552	.43	3.08	212	
7	2	0	1	45.13	44.51	-31.75	31.18	.31849	.62	1.71	135	
7	2	2	1	33.94	33.60	-24.02	23.50	.35580	.33	1.20	135	
7	2	4	1	16.42	16.68	11.41	-12.17	.44929	-.26	-1.62	314	
7	2	6	1 L	2.40	1.04	-.91	.50	.57205	1.36	2.11	151	
7	2	8	1	9.70	9.60	-8.30	4.81	.70904	.10	.37	149	
7	3	-7	1	32.17	32.37	27.84	-16.52	.64636	-.20	-.64	330	
7	3	-5	1	37.77	38.28	14.39	-35.47	.51725	-.51	-1.40	293	
7	3	-3	1	75.87	76.70	-44.72	-62.31	.40917	-.82	-1.94	235	
7	3	-1	1	36.13	36.07	-34.65	10.02	.34265	.06	.16	163	
7	3	1	1	36.68	35.35	24.07	-25.89	.34280	1.33	3.43	313	
7	3	3	1	24.87	24.56	-4.77	-24.10	.40954	.31	1.17	259	
7	3	5	1	8.00	7.98	5.44	-5.84	.51774	.01	.06	313	
7	3	7	1	46.27	45.10	12.50	-43.33	.64691	1.16	2.76	287	
7	4	-8	1	21.76	21.16	18.80	9.72	.72481	.60	2.91	27	
7	4	-6	1	20.36	20.00	.53	-19.99	.59166	.37	2.01	272	
7	4	-4	1	25.93	26.92	-25.30	9.20	.47422	-.98	-3.98	160	
7	4	-2	1	25.64	26.08	25.92	2.91	.38706	-.44	-1.79	6	
7	4	0	1	28.79	28.40	8.14	-27.20	.35336	.39	1.38	287	
7	4	2	1	46.70	47.52	-34.54	32.63	.38732	-.82	-1.98	136	
7	4	4	1	20.19	20.74	9.07	18.66	.47464	-.55	-2.84	64	
7	4	6	1	13.51	13.92	-9.74	-9.94	.59217	-.40	-2.06	226	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
7	4	8	1	14.02	14.17	-12.59	6.52	.72537	-.16	-.68	152	
7	5	-7	1	42.89	42.43	-4.68	42.17	.67008	.46	1.29	96	
7	5	-5	1	35.18	35.45	31.37	-16.52	.54660	-.28	-.91	333	
7	5	-3	1	21.26	21.26	-8.26	19.59	.44570	.00	.00	112	
7	5	-1	1	86.31	86.55	-52.77	68.60	.38554	-.24	-.59	127	
7	5	1	1	46.64	46.39	9.36	45.44	.38567	.25	.60	78	
7	5	3	1	17.16	17.21	7.88	15.30	.44604	-.05	-.31	62	
7	5	5	1	33.63	33.58	-23.79	23.70	.54706	.C5	.15	135	
7	5	7	1	45.42	45.60	21.43	40.25	.67061	-.19	-.42	61	
7	6	-8	1	34.52	34.47	17.51	-29.69	.75126	.05	.15	301	
7	6	-6	1	29.49	28.95	-19.55	-21.35	.62377	.54	2.00	228	
7	6	-4	1	31.99	32.39	-22.08	23.70	.51373	-.40	-1.34	132	
7	6	-2	1	22.14	21.36	9.41	-19.18	.43457	.78	3.65	297	
7	6	0	1	19.52	19.65	-17.85	8.23	.40484	-.14	-.74	155	
7	6	2	1	15.52	15.20	-2.85	14.93	.43480	.32	2.17	100	
7	6	4	1	44.05	44.70	36.94	-25.17	.51412	-.65	-1.82	326	
7	6	6	1	13.55	12.90	-3.20	-12.50	.62426	.65	3.19	256	
7	6	8	1	21.56	21.95	-14.35	16.61	.75179	-.40	-1.87	130	
7	7	-7	1	6.23	5.93	-4.51	3.84	.70417	.30	.80	139	
7	7	-5	1	28.79	29.45	16.38	-24.48	.58789	-.66	-2.56	304	
7	7	-3	1	90.71	90.83	-30.80	-85.45	.49547	-.11	-.24	251	
7	7	-1	1	25.21	24.72	-23.16	-8.66	.44213	.49	2.05	201	
7	7	1	1	68.20	68.07	64.24	-22.51	.44225	.13	.29	341	
7	7	3	1	55.95	55.45	14.69	-53.47	.49578	.50	1.02	286	
7	7	5	1	13.20	12.86	-12.75	-1.69	.58832	.34	1.75	188	
7	7	7	1	34.32	34.06	15.30	-30.43	.70467	.26	.80	297	
7	8	-6	1	23.06	23.39	-17.20	-15.85	.66614	-.33	-1.48	223	
7	8	-4	1	30.52	30.45	-15.48	26.22	.56442	.07	.27	120	
7	8	-2	1	45.14	45.08	40.82	19.13	.49346	.06	.11	25	
7	8	0	1	54.47	55.11	15.27	-52.95	.46749	-.64	-1.37	287	
7	8	2	1	4.02	3.50	-2.21	2.71	.49366	.53	1.50	129	
7	8	4	1	18.24	17.96	17.53	3.89	.56478	.29	1.65	12	
7	8	6	1	15.83	16.02	-5.17	-15.16	.66660	-.20	-.97	252	
7	9	-7	1	39.86	39.38	8.72	38.41	.74720	.48	1.41	77	
7	9	-5	1	30.58	30.45	29.97	-5.39	.63880	.13	.49	350	
7	9	-3	1	31.18	31.83	-27.36	16.26	.55493	-.65	-2.38	149	
7	9	-1	1	65.33	63.66	-10.26	62.83	.50788	1.67	3.39	99	
7	9	1	1	47.52	46.30	20.10	41.71	.50798	1.22	2.47	64	
7	9	3	1	5.25	4.95	1.93	-4.56	.55521	.30	.93	293	
7	9	5	1	13.21	12.82	-.35	12.82	.63920	.38	1.82	91	
7	9	7	1	36.15	35.43	13.84	32.61	.74767	.73	2.14	67	
7	10	-6	1	32.66	32.83	-27.79	-17.49	.71694	-.17	-.57	213	
7	10	-4	1	26.41	26.41	-10.83	24.09	.62356	-.01	-.03	114	
7	10	-2	1	32.08	31.76	30.47	8.96	.56015	.31	1.14	16	
7	10	0	1	11.87	11.68	-2.22	-11.47	.53741	.19	1.01	260	
7	10	2	1	7.59	7.00	-5.36	4.51	.56033	.59	2.32	139	
7	10	4	1	10.81	11.12	10.91	-2.16	.62389	-.31	-1.37	349	
7	10	6	1	37.20	37.24	-25.57	-27.08	.71737	-.04	-.11	227	
7	11	-5	1	28.80	28.20	28.18	-1.18	.69724	.60	2.38	358	
7	11	-3	1	58.36	57.78	-12.25	-56.47	.62131	.57	1.00	258	
7	11	-1	1	21.46	20.74	-19.58	-6.82	.57966	.72	3.64	200	
7	11	1	1	29.79	29.26	28.16	-7.96	.57975	.52	2.04	345	
7	11	3	1	50.18	50.45	-4.58	-50.25	.62155	-.27	-.67	265	
7	11	5	1	18.99	18.57	-18.11	-4.10	.69760	.42	2.04	193	
7	12	-4	1	29.09	28.60	.26	28.60	.68899	.49	2.00	89	
7	12	-2	1	33.95	33.93	24.09	23.89	.63217	.02	.06	44	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
7	12	0	1	24.86	25.15	-1.05	-25.13	.61212	-.30	-1.20	268	
7	12	2	1	6.61	5.48	-4.93	4.21	.63233	.13	.42	139	
7	12	4	1	7.93	7.11	-7.10	-.46	.68929	.82	2.69	184	
7	13	-3	1	20.89	20.54	-19.27	7.10	.69261	.36	1.76	159	
7	13	-1	1	42.33	42.28	-7.18	41.66	.65551	.05	.14	99	
7	13	1	1	44.29	44.46	2.76	44.37	.65559	-.17	-.40	86	
7	13	3	1	17.20	16.85	-6.16	15.69	.69283	.34	1.63	111	
7	14	-2	1	18.70	18.67	17.20	7.26	.70791	.02	.12	22	
7	14	0	1	16.66	15.98	-1.16	-15.94	.69006	.68	3.26	266	
7	14	2	1	20.88	20.55	-17.74	-10.37	.70805	.33	1.63	211	
7	15	-1	1	29.52	29.45	-19.30	-22.24	.73416	.07	.25	230	
7	15	1	1	16.28	16.79	-.17	-16.79	.73423	-.51	-2.20	270	
8	0	-8	1	15.65	14.94	14.73	2.50	.72300	.70	3.18	9	
8	0	-6	1	63.47	64.53	64.53	-.22	.58945	-1.06	-1.91	0	
8	0	-4	1	34.37	34.34	-27.77	-20.20	.47147	.03	.10	217	
8	0	-2	1	46.37	46.15	-24.39	39.18	.38371	.22	.54	121	
8	0	0	1	118.26	121.95	94.29	77.33	.34971	-3.68	-9.64	39	
8	0	2	1	57.97	58.74	56.82	-14.89	.38401	-.77	-1.88	346	
8	0	4	1	72.57	75.53	32.51	-68.17	.47196	-2.95	-6.33	296	
8	0	6	1	9.74	9.65	-8.81	-3.94	.59004	.09	.39	205	
8	0	8	1	21.29	21.30	11.17	-18.14	.72364	-.01	-.06	302	
8	1	-7	1	10.16	10.46	-.60	-10.44	.65633	-.30	-1.20	267	
8	1	-5	1	26.32	25.95	-20.22	16.27	.52967	.37	1.38	141	
8	1	-3	1	75.17	77.51	47.39	61.34	.42479	-2.34	-5.38	52	
8	1	-1	1	40.40	41.10	26.31	-31.58	.36118	-.71	-1.79	310	
8	1	1	1	65.48	67.00	-48.60	-46.11	.36134	-1.52	-3.87	224	
8	1	3	1	37.17	37.60	-8.80	36.55	.42520	-.43	-1.37	103	
8	1	5	1	15.68	15.63	11.61	-10.46	.53022	.05	.28	318	
8	1	7	1	22.01	22.23	-14.52	-16.84	.65695	-.22	-.95	230	
8	2	-8	1	24.92	25.24	-24.99	3.51	.72838	-.31	-1.48	172	
8	2	-6	1	20.26	19.38	-15.36	11.82	.59603	.88	4.53	142	
8	2	-4	1	36.42	36.00	-10.83	-34.34	.47968	.42	1.22	253	
8	2	-2	1	84.66	84.98	-83.25	17.05	.39375	-.31	-.76	168	
8	2	0	1	94.65	96.95	3.00	96.90	.36070	-2.29	-5.90	88	
8	2	2	1	72.32	71.64	52.20	-49.06	.39405	.68	1.66	317	
8	2	4	1	88.45	89.39	-78.42	-42.90	.48016	-.94	-1.98	209	
8	2	6	1	46.79	46.88	-39.53	25.20	.59662	-.08	-.21	147	
8	2	8	1	18.52	18.26	-12.82	13.00	.72901	.26	1.23	134	
8	3	-7	1	9.68	9.65	-6.33	-7.28	.66812	.03	.12	229	
8	3	-5	1	29.41	28.98	-24.73	15.10	.54421	.43	1.60	148	
8	3	-3	1	22.41	22.47	22.46	.44	.44279	-.06	-.29	1	
8	3	-1	1	52.34	52.35	30.13	-42.80	.38219	-.01	-.02	306	
8	3	1	1	21.53	22.27	-21.06	7.24	.38234	-.74	-3.36	161	
8	3	3	1	38.32	38.36	-8.49	37.40	.44318	-.04	-.11	102	
8	3	5	1	13.11	12.51	12.33	2.14	.54475	.60	3.35	9	
8	3	7	1	8.05	7.96	5.10	-6.12	.66873	.09	.31	310	
8	4	-8	1	9.81	10.19	9.79	-2.83	.74428	-.38	-1.30	344	
8	4	-6	1	52.85	53.43	50.70	-16.88	.61537	-.59	-1.02	342	
8	4	-4	1	34.49	33.98	-5.42	-33.54	.50350	.52	1.78	261	
8	4	-2	1	37.60	37.08	-30.27	21.42	.42245	.52	1.66	144	
8	4	0	1	60.75	59.56	48.18	35.02	.39182	1.19	2.87	36	
8	4	2	1	68.60	68.78	65.73	-20.26	.42272	-.18	-.42	343	
8	4	4	1	58.06	59.21	44.36	-39.22	.50396	-1.15	-2.35	319	
8	4	6	1	14.32	13.82	4.36	13.11	.61593	.50	2.53	71	
8	4	8	1	23.13	23.59	23.49	-2.17	.74490	-.45	-2.17	355	
8	5	-7	1	16.19	16.31	.31	-16.30	.69110	-.11	-.52	[illegible]	

FC

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
8	5	-5	1		11.38	11.21	-11.18	.67	.57219	.17	.84	176	
8	5	-3	1		39.17	39.98	31.69	24.36	.47675	-.80	-2.37	37	
8	5	-1	1		56.32	55.99	14.94	-53.96	.42106	.33	.75	286	
8	5	1	1		79.24	80.51	-57.95	-55.89	.42120	-1.27	-2.94	224	
8	5	3	1		33.22	33.55	-12.38	31.18	.47711	-.33	-.96	111	
8	5	5	1		35.14	35.39	31.54	16.05	.57269	-.25	-.78	26	
8	5	7	1		5.84	5.47	-5.01	2.19	.69169	.37	.97	156	
8	6	-6	1		31.01	30.78	-28.92	-10.53	.64631	.23	.84	201	
8	6	-4	1		58.22	59.02	-33.75	-48.41	.54088	-.80	-1.54	236	
8	6	-2	1		56.14	55.66	-55.37	-5.69	.46637	.49	1.04	186	
8	6	0	1		43.50	42.96	-8.80	42.05	.43881	.53	1.18	101	
8	6	2	1		25.32	24.82	23.82	6.98	.46662	.50	2.08	16	
8	6	4	1		51.94	52.17	-52.17	-.73	.54131	-.24	-.45	181	
8	6	6	1		24.59	24.11	-23.86	-3.47	.64685	.47	2.11	189	
8	7	-7	1	L	2.28	1.81	.07	-1.80	.72420	.48	.49	273	
8	7	-5	1		19.16	18.86	5.29	18.10	.61175	.30	1.59	73	
8	7	-3	1		21.21	21.92	3.55	-21.63	.52358	-.70	-3.37	280	
8	7	-1	1		27.90	28.21	11.57	-25.73	.47343	-.31	-1.10	295	
8	7	1	1		37.60	37.80	-25.77	27.65	.47355	-.19	-.57	132	
8	7	3	1		25.90	25.82	-16.81	19.60	.52391	.08	.34	130	
8	7	5	1		27.81	28.22	17.75	21.94	.61223	-.41	-1.54	51	
8	7	7	1		17.24	16.59	14.91	7.27	.72476	.65	2.93	25	
8	8	-6	1		39.97	39.92	38.51	-10.53	.68729	.05	.13	345	
8	8	-4	1		30.03	29.76	29.62	-2.88	.58924	.27	.94	355	
8	8	-2	1		33.12	32.83	-11.14	30.88	.52168	.29	.98	109	
8	8	0	1		11.91	11.38	-.18	11.38	.49720	.53	2.93	90	
8	8	2	1		44.45	44.66	41.96	-15.28	.52190	-.21	-.59	340	
8	8	4	1		37.27	37.93	32.25	-19.97	.58963	-.66	-2.05	329	
8	8	6	1		6.86	6.52	-2.01	6.20	.68779	.33	1.00	107	
8	9	-5	1		20.82	20.66	2.51	20.51	.66083	.16	.83	83	
8	9	-3	1		23.04	22.63	22.63	-.01	.58016	.41	2.00	0	
8	9	-1	1		26.92	26.07	4.91	-25.60	.53534	.85	3.51	281	
8	9	1	1		34.81	35.53	-29.42	-19.91	.53545	-.72	-2.35	215	
8	9	3	1		35.23	34.91	-33.47	9.93	.58046	.32	.99	163	
8	9	5	1		10.37	10.53	1.38	10.43	.66127	-.15	-.62	82	
8	10	-6	1		29.45	29.14	-26.16	-12.85	.73663	.31	1.17	207	
8	10	-4	1		38.17	37.88	-37.30	-6.58	.64611	.29	.83	191	
8	10	-2	1		19.44	19.31	-18.30	6.16	.58516	.14	.77	161	
8	10	0	1		20.78	20.48	-14.14	14.81	.56345	.30	1.52	133	
8	10	2	1		26.04	26.00	-11.27	23.43	.58536	.04	.18	115	
8	10	4	1		21.37	21.34	-21.34	-.31	.64647	.03	.14	181	
8	10	6	1		39.69	39.37	-19.31	-34.32	.73710	.31	.95	241	
8	11	-5	1		33.13	32.94	28.34	16.80	.71747	.19	.62	30	
8	11	-3	1		11.15	10.97	10.92	1.11	.64394	.17	.73	5	
8	11	-1	1	L	2.88	3.91	3.91	-.01	.60388	-1.03	-1.63	0	
8	11	1	1		12.20	11.52	-11.52	.18	.60397	.68	3.28	179	
8	11	3	1		6.88	7.62	-7.61	-.44	.64421	-.74	-2.33	184	
8	11	5	1		21.10	20.80	6.72	19.68	.71788	.30	1.47	71	
8	12	-4	1		21.32	21.60	15.89	14.63	.70947	-.27	-1.31	42	
8	12	-2	1		26.88	26.57	24.38	10.56	.65444	.32	1.21	23	
8	12	0	1		18.97	18.45	17.36	-6.25	.63510	.53	2.76	341	
8	12	2	1		21.58	21.18	21.13	-1.40	.65462	.40	2.04	357	
8	12	4	1		37.38	37.74	34.13	-16.12	.70979	-.36	-1.11	335	
8	13	-3	1		25.77	25.69	12.91	-22.21	.71298	.08	.33	301	
8	13	-1	1		15.84	15.25	-10.29	-11.25	.67702	.59	2.73	228	
8	13	1	1		17.87	18.41	13.15	-12.89	.67710	-.54	-2.65	316	

C

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
8	13	3	1		16.06	15.99	-14.48	-6.80	.71323	.07	.31	206	
8	14	-2	1		7.67	7.52	-4.64	-5.92	.72786	.15	.45	232	
8	14	0	1		17.47	17.77	-16.67	-6.16	.71052	-.30	-1.37	201	
8	14	2	1		18.38	18.63	-15.07	10.95	.72802	-.25	-1.16	143	
8	15	-1	1	L	1.98	2.97	2.83	-.88	.75343	-.98	-.84	343	
8	15	1	1		9.90	9.67	4.96	-8.29	.75350	.24	.81	301	
9	1	-7	1		13.33	12.87	12.73	1.85	.68059	.46	2.07	8	
9	1	-5	1		29.42	28.45	-7.94	27.32	.55947	.98	3.56	106	
9	1	-3	1		52.75	53.03	9.68	52.14	.46142	-.27	-.59	79	
9	1	-1	1		28.49	27.69	5.71	27.09	.40364	.81	3.22	78	
9	1	1	1		84.23	86.27	-29.29	81.14	.40381	-2.03	-4.86	109	
9	1	3	1		29.83	29.28	-4.92	28.87	.46185	.55	1.99	99	
9	1	5	1		38.08	38.69	35.24	15.97	.56005	-.61	-1.59	24	
9	1	7	1		27.93	27.22	-11.51	24.66	.68126	.71	2.90	115	
9	2	-8	1		17.61	17.18	-14.11	9.80	.75031	.43	1.89	145	
9	2	-6	1		11.91	11.82	-10.65	5.13	.62265	.09	.42	154	
9	2	-4	1		13.86	13.50	9.53	-9.55	.51239	.36	2.11	315	
9	2	-2	1		10.72	11.15	10.57	3.56	.43303	-.43	-2.64	18	
9	2	0	1		18.71	18.27	16.46	-7.92	.40322	.44	2.55	335	
9	2	2	1		28.15	28.30	27.99	-4.12	.43333	-.14	-.54	352	
9	2	4	1		7.50	6.51	-5.40	3.63	.51290	1.00	4.51	146	
9	2	6	1		12.85	12.68	-12.55	-1.82	.62328	.17	.83	189	
9	2	8	1		6.47	6.41	5.16	3.81	.75100	.06	.15	36	
9	3	-7	1		19.73	19.51	-2.31	-19.37	.69197	.22	1.10	264	
9	3	-5	1		24.00	24.23	-9.01	-22.50	.57325	-.23	-1.06	249	
9	3	-3	1		42.33	43.12	-3.73	-42.96	.47804	-.80	-2.37	266	
9	3	-1	1		63.58	62.93	31.62	-54.41	.42254	.65	1.50	301	
9	3	1	1		71.72	73.43	10.09	-72.73	.42270	-1.72	-3.95	278	
9	3	3	1		30.35	30.64	27.12	-14.27	.47845	-.29	-1.03	333	
9	3	5	1		32.52	31.62	12.48	-29.05	.57382	.90	2.78	294	
9	3	7	1		30.05	31.13	-8.58	-29.93	.69263	-1.08	-3.66	255	
9	4	-6	1		11.95	11.54	6.62	9.45	.64119	.41	1.86	54	
9	4	-4	1		24.36	24.24	16.64	-17.63	.53476	.11	.51	314	
9	4	-2	1		37.60	38.23	-38.23	-.81	.45927	-.63	-1.92	182	
9	4	0	1		28.22	28.47	9.68	26.77	.43129	-.25	-.95	70	
9	4	2	1		46.24	45.94	38.36	-25.27	.45956	.30	.64	327	
9	4	4	1		22.84	22.61	-15.34	-16.61	.53525	.23	1.11	228	
9	4	6	1		23.44	23.47	16.99	16.19	.64179	-.03	-.12	43	
9	5	-7	1		11.74	10.74	10.66	1.33	.71418	1.00	4.06	7	
9	5	-5	1		33.66	34.51	-16.76	30.17	.59987	-.86	-2.52	119	
9	5	-3	1		49.74	49.71	16.81	46.78	.50966	.03	.07	70	
9	5	-1	1		17.96	18.19	13.82	11.83	.45801	-.23	-1.34	40	
9	5	1	1		83.08	83.78	-39.71	73.77	.45815	-.70	-1.54	118	
9	5	3	1		46.51	47.08	-11.47	45.66	.51004	-.57	-1.13	104	
9	5	5	1		35.67	35.20	31.80	15.10	.60041	.47	1.42	25	
9	5	7	1		20.27	20.23	-20.21	.76	.71482	.04	.22	177	
9	6	-6	1		21.17	21.07	-2.47	20.92	.67094	.10	.53	96	
9	6	-4	1		17.93	18.13	17.59	-4.37	.57009	-.20	-1.10	347	
9	6	-2	1		16.64	17.15	-3.04	16.88	.49997	-.51	-3.04	100	
9	6	0	1		11.10	10.86	-3.52	10.28	.47439	.23	1.31	108	
9	6	2	1		16.30	16.03	13.52	-8.62	.50023	.27	1.57	328	
9	6	4	1		26.76	26.84	-26.82	-.97	.57055	-.08	-.32	183	
9	6	6	1		23.72	23.87	-23.11	6.01	.67152	-.15	-.75	165	
9	7	-7	1		38.19	38.35	23.96	-29.95	.74625	-.16	-.48	309	
9	7	-5	1		26.30	26.01	-13.34	-22.33	.63772	.28	1.20	240	
9	7	-3	1		12.06	12.60	-7.06	-10.43	.55371	-.54	-2.80	236	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
9	7	-1	1	50.66	50.92	4.48	-50.73	.50657	-.27	-.54	276	
9	7	1	1	69.53	69.71	-48.89	-49.70	.50670	-.18	-.37	226	
9	7	3	1	23.35	23.40	13.54	19.09	.55406	-.06	-.26	54	
9	7	5	1	54.60	55.21	36.73	-41.22	.63823	-.61	-1.04	312	
9	7	7	1	35.52	36.10	-9.67	-34.78	.74686	-.58	-1.69	255	
9	8	-6	1	15.27	15.46	12.07	9.66	.71050	-.18	-.82	38	
9	8	-4	1	21.56	21.31	3.60	-21.00	.61616	.26	1.30	280	
9	8	-2	1	46.29	45.85	-44.06	-12.65	.55192	.45	1.19	197	
9	8	0	1	34.83	34.77	8.40	33.74	.52886	.06	.19	76	
9	8	2	1	23.31	22.93	13.80	-18.31	.55216	.38	1.77	307	
9	8	4	1	30.92	31.23	-28.49	-12.81	.61658	-.31	-1.06	205	
9	8	6	1	27.89	27.59	12.01	24.83	.71105	.30	1.20	64	
9	9	-5	1	20.55	20.18	-12.25	16.04	.68494	.36	1.82	127	
9	9	-3	1	43.09	42.87	22.83	36.28	.60750	.22	.53	57	
9	9	-1	1	6.03	6.19	-4.40	4.36	.56486	-.16	-.53	135	
9	9	1	1	49.96	50.12	-32.86	37.85	.56498	-.16	-.30	130	
9	9	3	1	54.09	54.11	-14.21	52.21	.60782	-.02	-.03	105	
9	9	5	1	29.69	29.10	13.62	25.71	.68542	.59	2.23	62	
9	10	-4	1	11.77	11.57	11.21	-2.87	.67076	.20	.85	346	
9	10	-2	1	6.16	6.32	-4.84	4.05	.61228	-.16	-.49	140	
9	10	0	1	20.67	20.87	1.63	20.80	.59157	-.20	-1.02	85	
9	10	2	1	18.29	18.16	4.91	-17.48	.61249	.13	.72	286	
9	10	4	1	21.02	21.21	-18.54	-10.30	.67115	-.19	-.98	210	
9	11	-5	1	33.90	33.67	-17.40	-28.82	.73974	.23	.74	239	
9	11	-3	1	14.82	14.56	2.84	-14.28	.66867	.26	1.25	282	
9	11	-1	1	50.69	51.02	5.80	-50.69	.63019	-.34	-.81	277	
9	11	1	1	45.89	46.01	-28.45	-36.16	.63030	-.12	-.29	232	
9	11	3	1	38.77	38.17	20.86	31.96	.66897	.60	1.66	56	
9	11	5	1	44.29	45.20	33.35	-30.50	.74018	-.91	-2.33	318	
9	12	-4	1	10.20	10.28	-4.31	-9.34	.73198	-.08	-.28	246	
9	12	-2	1	17.78	17.83	-7.91	-15.98	.67879	-.05	-.22	244	
9	12	0	1	28.33	28.76	28.50	3.82	.66018	-.43	-1.69	7	
9	12	2	1	24.42	24.91	15.38	-19.59	.67899	-.49	-2.06	309	
9	12	4	1	13.56	13.94	-11.92	-7.23	.73234	-.38	-1.58	212	
9	13	-3	1	37.46	37.21	21.88	30.10	.73540	.25	.75	53	
9	13	-1	1	6.87	7.64	5.03	5.75	.70059	-.77	-2.14	48	
9	13	1	1	15.85	16.22	-11.67	11.27	.70068	-.37	-1.65	135	
9	13	3	1	26.07	25.94	-5.78	25.29	.73566	.13	.58	102	
9	14	-2	1	13.77	13.91	6.86	12.10	.74984	-.14	-.54	60	
9	14	0	1	20.34	20.32	12.24	16.22	.73303	.02	.09	52	
9	14	2	1	15.51	15.39	4.29	-14.78	.75001	.11	.47	287	
10	0	-6	1	46.79	46.63	16.51	-43.61	.64510	.16	.37	291	
10	0	-4	1	14.31	14.22	-.03	14.22	.53946	.09	.51	90	
10	0	-2	1	64.01	64.09	37.61	51.90	.46475	-.08	-.17	54	
10	0	0	1	14.30	13.44	-3.47	-12.99	.43713	.86	5.83	256	
10	0	2	1	46.70	47.53	42.79	-20.68	.46506	-.83	-1.79	335	
10	0	4	1	54.05	54.01	50.82	18.28	.54000	.03	.07	19	
10	0	6	1	28.78	29.24	25.29	-14.68	.64577	-.46	-1.69	330	
10	1	-7	1	26.00	25.78	-22.86	11.92	.70673	.22	.98	152	
10	1	-5	1	25.60	25.41	15.97	19.76	.59099	.19	.82	51	
10	1	-3	1	37.79	36.40	5.85	-35.93	.49919	1.39	3.97	280	
10	1	-1	1	5.99	6.47	1.41	-6.32	.44635	-.48	-2.01	283	
10	1	1	1	13.95	13.57	11.32	7.48	.44651	.38	2.47	33	
10	1	3	1	29.97	29.70	-25.42	-15.36	.49963	.27	.91	212	
10	1	5	1	38.60	39.77	-12.22	37.84	.59161	-1.17	-2.92	107	
10	1	7	1	36.84	36.87	28.81	23.01	.70744	-.03	-.10	38	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
10	2	-6	1	51.23	51.15	-32.35	-39.62	.65112	.08	.19	231	
10	2	-4	1	55.09	55.09	-53.29	-13.95	.54665	.00	.01	195	
10	2	-2	1	31.18	30.60	-30.49	-2.63	.47308	.58	2.07	185	
10	2	0	1	13.07	12.48	-2.68	-12.19	.44597	.59	3.74	258	
10	2	2	1	68.19	69.76	-30.53	62.73	.47338	-1.57	-3.34	115	
10	2	4	1	10.67	9.23	8.46	3.68	.54718	1.44	7.30	23	
10	2	6	1	52.44	52.39	-24.32	-46.40	.65179	.06	.13	243	
10	3	-7	1	23.30	23.31	-20.99	10.14	.71769	-.01	-.05	154	
10	3	-5	1	36.37	36.69	21.89	29.44	.60406	-.32	-.96	53	
10	3	-3	1	27.59	27.55	27.54	.73	.51460	.03	.12	1	
10	3	-1	1	10.59	9.59	-7.03	-6.52	.46351	1.00	5.70	223	
10	3	1	1	21.04	20.54	-6.11	-19.61	.46367	.50	2.44	253	
10	3	3	1	26.27	26.61	-8.99	-25.05	.51502	-.35	-1.32	251	
10	3	5	1	28.57	28.39	-17.83	22.08	.60466	.18	.69	128	
10	3	7	1	24.05	24.33	16.16	18.18	.71840	-.28	-1.25	48	
10	4	-6	1	25.83	25.87	20.49	-15.79	.66887	-.04	-.16	323	
10	4	-4	1	23.04	23.48	-9.18	21.61	.56767	-.44	-2.01	113	
10	4	-2	1	52.61	53.17	37.16	38.03	.49722	-.57	-1.16	45	
10	4	0	1	8.14	7.64	4.62	6.09	.47150	.50	2.44	52	
10	4	2	1	28.98	29.34	26.07	-13.46	.49751	-.36	-1.25	333	
10	4	4	1	40.86	40.54	39.92	-7.07	.56818	.31	.81	350	
10	4	6	1	31.20	31.24	17.10	-26.15	.66951	-.04	-.15	304	
10	5	-7	1	33.05	33.05	-19.62	26.60	.73913	.00	.00	126	
10	5	-5	1	26.41	26.22	10.76	23.92	.62938	.19	.81	65	
10	5	-3	1	9.83	9.77	3.46	-9.13	.54409	.06	.31	291	
10	5	-1	1	3.51	3.59	-3.17	-1.68	.49605	-.07	-.18	208	
10	5	1	1	8.67	5.92	4.80	-3.46	.49620	2.75	13.73	325	
10	5	3	1	38.38	38.59	-38.42	-3.66	.54449	-.21	-.55	186	
10	5	5	1	19.29	19.38	-12.35	14.94	.62995	-.10	-.49	129	
10	5	7	1	27.29	27.16	27.13	-1.25	.73981	.13	.48	358	
10	6	-6	1	17.86	17.55	-13.79	-10.86	.69744	.31	1.48	219	
10	6	-4	1	26.11	25.97	-25.91	1.83	.60107	.14	.59	175	
10	6	-2	1	37.70	37.58	-36.99	6.60	.53503	.12	.32	169	
10	6	0	1	8.66	8.02	-6.07	5.25	.51122	.63	3.01	139	
10	6	2	1	26.45	26.25	-23.63	11.44	.53530	.20	.74	154	
10	6	4	1	15.94	15.87	.03	-15.87	.60155	.08	.41	271	
10	6	6	1	33.86	33.56	-25.78	-21.48	.69806	.30	1.04	220	
10	7	-5	1	23.28	23.04	7.81	21.67	.66555	.24	1.17	70	
10	7	-3	1	42.80	43.55	42.94	7.24	.58556	-.74	-1.89	9	
10	7	-1	1	23.39	23.29	8.10	-21.83	.54121	.10	.44	291	
10	7	1	1	27.08	27.06	-3.83	-26.79	.54135	.02	.07	262	
10	7	3	1	3.58	3.92	-.55	-3.88	.58593	-.34	-.72	262	
10	7	5	1	20.32	20.50	-18.80	8.17	.66610	-.17	-.89	156	
10	8	-6	1	24.55	24.23	23.87	-4.14	.73557	.32	1.47	351	
10	8	-4	1	11.21	10.60	-7.90	-7.07	.64493	.61	2.55	222	
10	8	-2	1	28.07	27.46	26.94	-5.28	.58387	.62	2.41	349	
10	8	0	1	28.14	27.96	16.78	22.36	.56214	.18	.72	53	
10	8	2	1	32.31	32.01	31.13	7.44	.58412	.30	.92	13	
10	8	4	1	38.54	38.23	35.75	-13.54	.64538	.31	.89	340	
10	8	6	1	18.47	18.03	16.22	-7.89	.73616	.43	1.99	335	
10	9	-5	1	8.65	8.84	8.45	-2.61	.71093	-.19	-.63	343	
10	9	-3	1	12.59	12.53	7.28	10.20	.63666	.07	.30	54	
10	9	-1	1	15.79	15.85	-.94	-15.83	.59613	-.07	-.35	267	
10	9	1	1	26.53	26.19	-14.49	-21.82	.59625	.35	1.43	237	
10	9	3	1	28.93	29.01	-18.55	22.31	.63700	-.08	-.30	129	
10	9	5	1	22.70	22.64	13.27	18.34	.71144	.06	.28	54	

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
10	10	-4	1		23.68	23.53	-8.13	-22.08	.69728	.15	.70	250	
10	10	-2	1		42.45	42.29	-42.14	-3.56	.64123	.15	.36	185	
10	10	0	1		15.94	15.90	-2.34	15.72	.62150	.04	.22	98	
10	10	2	1		3.84	4.56	-4.40	-1.20	.64145	-.72	-1.38	196	
10	10	4	1		15.48	15.79	-15.48	-3.12	.69769	-.31	-1.44	192	
10	11	-3	1		27.83	27.56	24.76	-12.11	.69528	.27	1.07	334	
10	11	-1	1		34.18	34.10	20.33	-27.38	.65836	.08	.27	307	
10	11	1	1		10.61	10.67	-10.19	-3.16	.65847	-.06	-.23	198	
10	11	3	1		18.44	18.30	-7.57	16.66	.69559	.15	.70	114	
10	12	-4	1		22.76	22.65	13.94	-17.85	.75636	.11	.51	308	
10	12	-2	1		10.81	11.08	-9.41	-5.85	.70502	-.27	-1.01	212	
10	12	0	1		30.02	30.54	-7.29	29.65	.68712	-.51	-1.74	103	
10	12	2	1		40.21	40.04	39.80	4.35	.70522	.18	.47	6	
10	12	4	1		23.85	23.67	18.63	-14.61	.75674	.18	.81	322	
10	13	-1	1		11.62	12.29	2.31	-12.07	.72604	-.67	-2.54	281	
10	13	1	1		41.18	41.06	-36.15	-19.48	.72613	.12	.30	209	
10	14	0	1		20.89	21.18	-1.06	21.16	.75739	-.29	-1.33	92	
11	1	-7	1		25.91	25.08	-9.27	23.31	.73453	.83	3.74	111	
11	1	-5	1		29.99	29.67	.28	29.67	.62399	.32	1.05	89	
11	1	-3	1		9.94	9.27	2.94	8.79	.53787	.67	3.27	71	
11	1	-1	1		49.25	50.65	8.79	49.88	.48923	-1.40	-2.88	80	
11	1	1	1		22.22	22.76	-.73	22.75	.48939	-.54	-2.59	91	
11	1	3	1		26.57	27.56	-13.88	23.81	.53831	-.99	-3.71	120	
11	1	5	1		20.06	20.65	-8.78	18.68	.62463	-.59	-2.87	115	
11	1	7	1	L	3.45	1.07	-.62	-.87	.73529	2.38	3.75	235	
11	2	-6	1		12.71	12.62	9.14	-8.70	.68121	.09	.39	317	
11	2	-4	1		16.04	15.76	-15.51	2.80	.58217	.28	1.54	169	
11	2	-2	1		7.44	8.02	-7.22	3.49	.51373	-.58	-2.53	154	
11	2	0	1		14.82	14.11	-14.00	1.74	.48890	.71	4.42	172	
11	2	2	1		23.20	23.37	-23.19	2.89	.51404	-.17	-.77	172	
11	2	4	1		10.84	10.29	10.11	-1.90	.58272	.55	2.67	350	
11	2	6	1		15.36	15.92	15.61	-3.13	.68191	-.56	-2.61	349	
11	3	-7	1		7.54	6.35	1.28	-6.22	.74509	1.19	3.54	282	
11	3	-5	1		41.69	40.56	18.92	-35.87	.63638	1.13	2.69	298	
11	3	-3	1		34.82	35.13	-14.41	-32.04	.55219	-.31	-1.00	246	
11	3	-1	1		70.44	72.32	-61.97	-37.29	.50494	-1.88	-3.83	212	
11	3	1	1		8.68	8.12	5.78	-5.70	.50510	.56	2.67	316	
11	3	3	1		27.74	28.50	14.16	-24.73	.55262	-.76	-2.67	300	
11	3	5	1		23.87	23.87	-13.69	-19.55	.63701	.01	.03	236	
11	3	7	1		18.76	19.30	19.28	-.76	.74584	-.53	-2.43	358	
11	4	-6	1		12.78	12.73	-3.71	-12.17	.69819	.06	.23	254	
11	4	-4	1		28.09	28.44	-27.93	5.36	.60195	-.35	-1.32	169	
11	4	-2	1		9.84	9.93	8.86	4.48	.53604	-.09	-.43	26	
11	4	0	1		6.65	6.38	2.55	-5.85	.51229	.26	1.08	294	
11	4	2	1		16.40	16.66	-15.83	5.20	.53634	-.27	-1.55	161	
11	4	4	1		13.55	13.32	10.88	7.68	.60248	.23	1.16	35	
11	4	6	1		20.35	20.24	-17.43	-10.28	.69887	.12	.56	211	
11	5	-5	1		31.52	30.91	21.96	21.76	.66046	.60	2.17	44	
11	5	-3	1		11.77	10.15	-1.91	-9.97	.57978	1.62	8.10	260	
11	5	-1	1		56.21	56.15	-21.82	51.74	.53497	.06	.12	112	
11	5	1	1		39.51	39.60	4.98	39.28	.53512	-.09	-.25	82	
11	5	3	1		14.45	14.47	2.89	14.18	.58019	-.02	-.11	78	
11	5	5	1		16.47	15.96	-7.00	14.34	.66106	.51	2.52	116	
11	6	-6	1		30.91	30.77	6.93	-29.98	.72560	.14	.44	284	
11	6	-4	1		22.00	22.17	-22.16	.66	.63355	-.16	-.76	178	
11	6	-2	1		20.13	19.83	16.36	11.20	.57129	.30	1.70	34	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
11	6	0	1	12.82	13.46	8.68	-10.28	.54907	-.63	-3.24	311	
11	6	2	1	21.29	21.46	-17.52	12.39	.57157	-.17	-.86	144	
11	6	4	1	22.06	22.33	21.55	5.82	.63405	-.26	-1.33	15	
11	6	6	1	23.95	24.26	21.43	-11.37	.72626	-.31	-1.47	333	
11	7	-5	1	38.52	38.19	26.40	-27.60	.69502	.33	.88	314	
11	7	-3	1	49.09	48.09	1.69	-48.06	.61886	1.00	2.46	273	
11	7	-1	1	43.00	43.81	-33.52	-28.20	.57709	-.81	-2.06	221	
11	7	1	1	39.86	39.61	39.59	1.22	.57723	.26	.65	1	
11	7	3	1	40.16	39.88	24.44	-31.51	.61924	.28	.69	308	
11	7	5	1	27.46	28.05	-27.03	-7.47	.69559	-.58	-2.33	196	
11	8	-4	1	24.75	24.46	-18.86	15.57	.67530	.30	1.34	140	
11	8	-2	1	26.79	26.85	18.57	19.39	.61727	-.05	-.20	46	
11	8	0	1	21.53	21.95	17.67	-13.02	.59676	-.42	-2.11	324	
11	8	2	1	9.46	9.14	.02	-9.14	.61753	.31	1.30	271	
11	8	4	1	12.67	12.77	11.57	5.41	.67577	-.11	-.47	25	
11	9	-5	1	39.33	39.08	25.03	30.01	.73858	.25	.74	50	
11	9	-3	1	18.31	17.85	-3.11	-17.58	.66742	.46	2.29	260	
11	9	-1	1	47.23	46.33	-16.07	43.46	.62888	.90	2.15	110	
11	9	1	1	47.35	47.25	2.66	47.18	.62901	.10	.24	86	
11	9	3	1	7.25	5.82	5.29	-2.43	.66777	1.43	4.65	336	
11	9	5	1	6.25	6.65	-1.92	6.37	.73912	-.40	-1.00	106	
11	10	-4	1	20.06	20.09	-17.84	9.23	.72546	-.03	-.13	152	
11	10	-2	1	34.51	34.50	22.91	25.80	.67178	.01	.02	48	
11	10	0	1	29.82	30.23	14.18	-26.70	.65299	-.41	-1.44	298	
11	10	2	1	12.22	12.06	-7.78	9.21	.67202	.16	.68	130	
11	10	4	1	4.58	5.73	4.02	4.09	.72590	-1.15	-2.31	45	
11	11	-3	1	29.11	29.01	-.37	-29.00	.72354	.10	.40	270	
11	11	-1	1	30.19	29.78	-19.62	-22.40	.68816	.41	1.42	229	
11	11	1	1	16.88	16.79	14.63	-8.24	.68827	.09	.41	331	
11	11	3	1	40.52	41.10	12.71	-39.09	.72387	-.58	-1.52	289	
11	12	-2	1	19.10	18.93	-1.49	18.87	.73292	.17	.75	94	
11	12	0	1	6.52	7.04	3.05	-6.35	.71573	-.52	-1.42	296	
11	12	2	1	19.05	19.43	-8.69	-17.38	.73313	-.38	-1.74	244	
11	13	-1	1	34.10	34.85	-22.58	26.55	.75316	-.75	-2.63	130	
11	13	1	1	40.67	40.43	-7.68	39.69	.75326	.25	.72	100	
12	0	-6	1	31.80	31.64	25.18	19.16	.70721	.16	.53	37	
12	0	-4	1	53.93	53.90	32.22	-43.22	.61240	.03	.05	307	
12	0	-2	1	26.68	26.87	-23.05	-13.81	.54776	-.19	-.78	211	
12	0	0	1	71.83	71.78	26.22	66.82	.52456	.05	.10	68	
12	0	2	1	67.91	69.69	69.65	-2.47	.54808	-1.79	-3.41	358	
12	0	4	1	51.88	52.85	26.82	-45.54	.61297	-.97	-1.68	301	
12	0	6	1	23.62	22.49	21.79	-5.58	.70794	1.13	5.49	346	
12	1	-5	1	19.90	19.53	-19.48	1.29	.65824	.37	1.90	176	
12	1	-3	1	50.53	50.54	9.24	49.69	.57726	-.01	-.02	79	
12	1	-1	1	34.82	34.96	32.63	-12.55	.53225	-.13	-.44	339	
12	1	1	1	49.58	50.55	-14.46	-48.43	.53241	-.96	-1.87	254	
12	1	3	1	21.86	22.00	-19.18	10.79	.57771	-.15	-.69	150	
12	1	5	1	9.02	9.74	9.74	.17	.65890	-.72	-2.76	0	
12	2	-6	1	13.75	13.74	.39	13.74	.71271	.01	.03	88	
12	2	-4	1	28.05	27.08	-26.33	-6.33	.61874	.97	3.60	194	
12	2	-2	1	59.73	60.29	-59.59	-9.13	.55484	-.55	-1.05	189	
12	2	0	1	58.67	59.90	-35.82	48.01	.53195	-1.23	-2.39	126	
12	2	2	1	20.57	20.52	20.29	3.05	.55516	.06	.29	8	
12	2	4	1	47.02	47.77	-15.50	-45.18	.61931	-.75	-1.82	252	
12	2	6	1	62.66	63.59	-63.43	4.55	.71344	-.94	-1.46	175	
12	3	-5	1	25.17	25.31	-25.30	-.80	.66999	-.15	-.59	182	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
	3	-3	1	17.28	16.99	9.70	13.94	.59063	.29	1.58	55	
12	3	-1	1	39.51	40.14	34.77	-20.06	.54672	-.63	-1.68	331	
12	3	1	1	23.45	23.79	-12.38	-20.32	.54688	-.34	-1.49	239	
12	3	3	1	42.33	42.63	-31.29	28.96	.59107	-.30	-.74	137	
12	3	5	1	12.15	11.89	7.83	8.94	.67064	.27	1.17	48	
12	4	-6	1	25.86	25.77	25.71	-1.76	.72895	.09	.38	357	
12	4	-4	1	62.64	62.61	46.39	-42.05	.63739	.02	.04	318	
12	4	-2	1	21.95	21.32	-20.23	-6.72	.57556	.63	3.06	199	
12	4	0	1	50.39	50.77	16.41	48.04	.55352	-.37	-.70	71	
12	4	2	1	67.83	67.72	67.65	3.06	.57586	.11	.20	2	
12	4	4	1	33.06	33.04	27.93	-17.65	.63793	.01	.04	328	
12	4	6	1	25.76	25.62	25.30	4.02	.72967	.14	.61	9	
12	5	-5	1	4.61	3.93	-2.19	-3.26	.69291	.69	1.48	237	
12	5	-3	1	30.72	31.05	11.90	28.68	.61650	-.33	-1.10	67	
12	5	-1	1	35.25	34.03	32.80	-9.05	.57457	1.22	3.80	345	
12	5	1	1	36.18	36.00	-15.61	-32.44	.57472	.18	.56	245	
12	5	3	1	11.44	11.23	-10.26	4.55	.61692	.22	.99	156	
12	5	5	1	26.44	26.72	10.63	24.52	.69353	-.29	-1.21	66	
12	6	-6	1	4.69	4.15	-1.83	-3.73	.75525	.54	1.07	244	
12	6	-4	1	39.81	39.67	-33.24	-21.65	.66731	.14	.38	214	
12	6	-2	1	42.97	43.32	-40.46	-15.46	.60853	-.35	-.84	201	
12	6	0	1	38.57	38.57	-28.80	25.65	.58773	.00	.01	138	
12	6	2	1	35.10	34.79	.44	34.79	.60881	.31	.94	89	
12	6	4	1	22.16	22.39	-18.99	-11.85	.66783	-.22	-1.11	212	
12	6	6	1	44.68	45.18	-44.98	-4.29	.75594	-.50	-1.27	186	
12	7	-5	1	16.21	16.26	-13.53	9.02	.72592	-.05	-.23	146	
12	7	-3	1	8.34	7.90	7.25	-3.13	.65339	.44	1.61	337	
12	7	-1	1	21.86	21.70	10.84	-18.80	.61398	.16	.82	300	
12	7	1	1	24.68	24.52	-23.19	-7.95	.61412	.16	.71	199	
12	7	3	1	34.95	34.54	-28.50	19.51	.65379	.41	1.34	145	
12	7	5	1	16.81	16.98	6.95	15.49	.72652	-.17	-.77	65	
12	8	-4	1	43.14	42.99	41.52	-11.14	.70707	.15	.40	345	
12	8	-2	1	18.39	17.68	-13.26	11.69	.65189	.71	3.64	138	
12	8	0	1	12.42	11.73	.56	11.72	.63252	.68	3.16	87	
12	8	2	1	43.63	43.40	42.44	-9.09	.65215	.23	.52	348	
12	8	4	1	27.97	27.76	27.05	-6.23	.70756	.21	.82	348	
12	9	-3	1	6.37	6.22	6.20	.57	.69955	.14	.39	5	
12	9	-1	1	21.85	21.38	20.59	-5.75	.66290	.48	2.38	345	
12	9	1	1	13.19	12.93	-5.27	-11.81	.66303	.26	1.18	246	
12	9	3	1	23.18	23.58	-14.11	-18.89	.69992	-.40	-1.75	234	
12	10	-4	1	39.14	38.82	-38.29	-6.42	.75513	.32	.93	190	
12	10	-2	1	23.71	23.16	-22.79	-4.09	.70372	.55	2.53	191	
12	10	0	1	22.14	22.27	-22.16	2.23	.68581	-.14	-.66	174	
12	10	2	1	29.64	30.05	-19.09	23.21	.70397	-.41	-1.51	129	
12	10	4	1	10.76	10.47	-9.08	-5.22	.75559	.28	1.01	210	
12	11	-3	1	17.43	17.24	14.46	9.38	.75329	.19	.82	32	
12	11	-1	1	13.35	12.82	-8.58	-9.52	.71938	.54	2.20	228	
12	11	1	1	19.37	19.19	-9.14	-16.88	.71950	.18	.83	242	
12	11	3	1	9.96	10.54	-10.54	.15	.75363	-.58	-1.99	179	
12	12	0	1	19.56	19.55	19.02	-4.56	.74580	.00	.02	347	
13	1	-5	1	12.65	12.71	-11.53	5.34	.69355	-.06	-.26	155	
13	1	-3	1	24.76	24.66	-10.71	22.21	.61723	.10	.43	115	
13	1	-1	1	25.75	25.28	10.13	23.16	.57537	.47	2.00	66	
13	1	1	1	28.24	28.83	-26.02	12.42	.57554	-.60	-2.37	154	
13	1	3	1	34.26	34.59	-10.82	32.85	.61769	-.33	-.97	108	
13	1	5	1	6.04	6.58	3.73	5.42	.69423	-.54	-1.50	55	

FC

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
13	2	-6	1		5.46	6.38	-6.28	-1.18	.74544	-.92	-2.08	191	
13	2	-4	1		7.99	8.15	8.14	-.44	.65619	-.16	-.56	357	
13	2	-2	1	L	2.84	3.43	2.74	2.07	.59633	-.60	-1.00	37	
13	2	0	1		12.71	13.04	12.68	3.05	.57510	-.33	-1.66	13	
13	2	2	1		16.93	17.22	17.01	2.71	.59664	-.29	-1.59	9	
13	2	4	1		10.36	10.17	-9.51	-3.60	.65676	.19	.78	201	
13	2	6	1		13.42	13.88	-13.49	-3.25	.74620	-.46	-1.88	194	
13	3	-5	1		9.92	9.73	5.19	-8.23	.70472	.19	.70	303	
13	3	-3	1		20.02	19.56	16.59	-10.36	.62976	.46	2.37	329	
13	3	-1	1		34.40	34.59	23.38	-25.49	.58879	-.18	-.57	313	
13	3	1	1		19.95	20.58	9.44	-18.29	.58895	-.63	-3.27	298	
13	3	3	1		20.09	19.25	6.62	-18.08	.63020	.84	4.30	291	
13	3	5	1		21.38	21.50	21.44	1.52	.70539	-.11	-.54	4	
13	4	-4	1		27.21	27.34	27.14	-3.35	.67380	-.14	-.52	353	
13	4	-2	1		13.17	13.06	-11.58	-6.04	.61565	.12	.56	208	
13	4	0	1		20.36	19.70	-10.30	16.79	.59511	.67	3.27	121	
13	4	2	1		24.86	24.99	24.93	1.69	.61596	-.12	-.54	3	
13	4	4	1		14.02	14.10	-6.17	-12.67	.67436	-.08	-.37	245	
13	5	-5	1		21.64	21.67	-20.95	5.54	.72654	-.02	-.10	165	
13	5	-3	1		26.82	26.90	-10.87	24.61	.65408	-.08	-.31	113	
13	5	-1	1		24.20	24.74	19.95	14.64	.61473	-.54	-2.33	36	
13	5	1	1		28.72	29.24	-29.03	3.50	.61489	-.52	-1.96	173	
13	5	3	1		45.89	46.09	-17.70	42.56	.65451	-.20	-.48	112	
13	5	5	1		12.98	13.89	9.90	9.74	.72718	-.91	-3.68	44	
13	6	-4	1	L	2.36	3.02	2.96	.62	.70217	-.66	-.74	11	
13	6	-2	1		18.59	18.12	-17.79	-3.43	.64658	.47	2.42	191	
13	6	0	1		9.16	9.67	3.92	8.84	.62705	-.51	-2.01	66	
13	6	2	1		20.84	20.96	17.80	-11.06	.64687	-.11	-.60	329	
13	6	4	1		25.27	25.69	-16.38	-19.79	.70271	-.42	-1.84	231	
13	7	-3	1	L	2.01	.64	.43	.47	.68896	1.37	1.36	47	
13	7	-1	1		35.30	35.36	11.25	-33.52	.65172	-.07	-.21	289	
13	7	1	1		41.20	41.68	-25.37	-33.06	.65186	-.47	-1.36	233	
13	7	3	1		8.11	8.85	-7.99	-3.80	.68937	-.73	-2.37	206	
13	8	-4	1		18.19	17.91	15.78	-8.47	.74006	.28	1.27	332	
13	8	-2	1		20.15	20.20	-13.93	-14.62	.68754	-.04	-.22	227	
13	8	0	1		26.85	26.30	-18.09	19.09	.66921	.55	2.11	133	
13	8	2	1		21.43	22.01	21.20	5.93	.68782	-.59	-2.68	15	
13	8	4	1		14.04	14.06	-5.60	-12.90	.74057	-.03	-.12	247	
13	9	-3	1		28.39	28.37	-5.30	27.87	.73288	.02	.06	100	
13	9	-1	1		11.02	11.34	9.30	6.49	.69799	-.32	-1.22	34	
13	9	1	1		20.02	20.29	-20.15	-2.38	.69813	-.27	-1.30	187	
13	9	3	1		50.49	51.27	-15.70	48.81	.73327	-.79	-1.68	107	
13	10	-2	1		19.15	19.40	-16.74	-9.81	.73687	-.25	-1.14	211	
13	10	0	1		23.36	24.00	4.93	23.49	.71980	-.63	-2.83	78	
13	10	2	1		19.29	19.29	7.59	-17.73	.73713	.00	.00	294	
13	11	-1	1		30.47	30.75	13.13	-27.80	.75184	-.28	-1.06	296	
13	11	1	1		29.80	30.26	-13.58	-27.04	.75197	-.46	-1.73	244	
14	0	-4	1		21.62	21.25	14.45	-15.58	.68873	.37	1.87	313	
14	0	-2	1		25.20	25.88	2.46	25.76	.63196	-.68	-2.88	84	
14	0	0	1		31.67	31.64	31.04	-6.15	.61198	.03	.10	349	
14	0	2	1		16.59	16.74	15.40	6.56	.63228	-.15	-.77	23	
14	0	4	1		41.68	41.46	41.44	1.36	.68931	.22	.60	1	
14	1	-5	1		22.94	22.71	1.69	22.65	.72977	.23	1.13	85	
14	1	-3	1		24.82	24.83	17.49	-17.62	.65768	-.01	-.05	315	
14	1	-1	1		4.21	3.14	1.91	-2.49	.61858	1.08	2.56	308	
14	1	1	1		10.96	10.60	5.12	9.28	.61874	.35	1.59	61	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
14	1	3	1	20.60	20.56	-9.42	-18.28	.65815	.03	.17	243	
14	1	5	1	29.98	29.83	-24.45	17.10	.73047	.14	.51	145	
14	2	-4	1	47.60	48.36	-48.33	-1.67	.69437	-.76	-1.70	182	
14	2	-2	1	20.59	20.15	-15.13	13.30	.63811	.44	2.23	138	
14	2	0	1	28.11	27.50	-27.09	-4.76	.61833	.61	2.28	190	
14	2	2	1	37.08	38.03	-30.48	22.74	.63843	-.95	-2.73	143	
14	2	4	1	41.07	40.70	-12.90	38.60	.69495	.37	1.02	108	
14	3	-5	1	24.51	24.28	1.61	24.23	.74039	.23	1.07	86	
14	3	-3	1	24.61	24.28	14.10	19.77	.66945	.33	1.52	54	
14	3	-1	1	5.52	5.40	1.17	-5.27	.63107	.12	.34	283	
14	3	1	1	13.04	12.75	1.21	-12.69	.63123	.29	1.39	276	
14	3	3	1	17.57	17.95	.94	-17.92	.66990	-.38	-1.88	274	
14	3	5	1	17.34	17.03	-15.90	6.09	.74108	.31	1.40	159	
14	4	-4	1	14.19	14.02	2.59	-13.78	.71104	.17	.71	281	
14	4	-2	1	14.68	14.10	10.80	9.07	.65621	.58	2.81	40	
14	4	0	1	32.09	31.72	31.26	-5.38	.63699	.37	1.22	351	
14	4	2	1	10.86	10.45	9.95	3.18	.65652	.41	1.67	17	
14	4	4	1	45.98	45.63	43.25	-14.53	.71161	.35	.93	342	
14	5	-3	1	26.63	26.43	15.78	-21.20	.69238	.21	.89	307	
14	5	-1	1	11.32	11.28	-.91	-11.24	.65535	.04	.17	266	
14	5	1	1	10.25	10.59	8.64	-6.12	.65550	-.34	-1.32	325	
14	5	3	1	25.55	25.71	-14.08	-21.51	.69282	-.17	-.70	237	
14	6	-4	1	27.15	26.64	-25.38	6.31	.73798	.52	2.09	166	
14	6	-2	1	27.83	27.64	-26.18	8.86	.68530	.19	.74	161	
14	6	0	1	32.42	31.56	-31.03	5.74	.66693	.86	2.71	169	
14	6	2	1	12.40	12.83	-10.71	-7.07	.68560	-.43	-1.80	214	
14	6	4	1	15.59	15.50	-7.64	13.49	.73852	.08	.37	119	
14	7	-3	1	34.92	34.71	11.76	32.66	.72542	.22	.64	70	
14	7	-1	1	17.82	17.63	16.26	-6.83	.69016	.19	.89	338	
14	7	1	1	19.63	19.58	6.33	-18.53	.69031	.05	.25	289	
14	7	3	1	8.09	7.90	-7.83	1.12	.72584	.18	.59	171	
14	8	-2	1	25.62	25.21	21.98	-12.34	.72408	.41	1.69	331	
14	8	0	1	27.25	27.09	25.60	8.87	.70671	.16	.61	19	
14	8	2	1	21.28	20.86	5.73	20.05	.72436	.42	2.02	74	
14	9	-1	1	10.59	10.52	1.08	-10.46	.73402	.07	.27	276	
14	9	1	1	17.25	16.81	-4.74	-16.13	.73416	.44	1.97	254	
14	10	0	1	39.04	39.19	-31.91	22.76	.75479	-.16	-.46	144	
15	1	-3	1	21.22	20.62	-12.78	16.19	.69853	.60	2.94	128	
15	1	-1	1	23.27	23.45	-18.37	14.57	.66185	-.18	-.76	141	
15	1	1	1	43.48	42.85	26.40	33.75	.66202	.63	1.46	51	
15	1	3	1	15.60	15.78	-7.09	14.09	.69899	-.18	-.82	116	
15	2	-4	1	15.46	15.45	-12.14	-9.56	.73317	.00	.02	219	
15	2	-2	1	8.89	9.04	-9.02	.62	.68014	-.15	-.55	176	
15	2	0	1	4.83	3.92	-2.59	2.95	.66162	.91	2.19	131	
15	2	2	1	15.71	15.76	-12.21	-9.97	.68046	-.05	-.24	220	
15	2	4	1	7.09	7.56	5.87	4.76	.73376	-.47	-1.33	39	
15	3	-3	1	38.46	37.96	9.41	-36.78	.70962	.50	1.32	285	
15	3	-1	1	28.07	28.15	-16.42	-22.87	.67354	-.08	-.30	235	
15	3	1	1	27.84	27.88	-19.55	-19.88	.67370	-.04	-.16	226	
15	3	3	1	20.53	20.95	16.23	-13.25	.71008	-.42	-2.06	321	
15	4	-4	1	23.60	23.20	-23.19	-.68	.74897	.40	1.83	182	
15	4	-2	1	10.77	11.45	7.14	8.95	.69714	-.68	-2.61	51	
15	4	0	1	11.62	11.77	5.22	-10.55	.67909	-.16	-.65	297	
15	4	2	1	8.89	8.31	-5.57	6.17	.69745	.58	2.01	132	
15	4	4	1	13.86	14.26	12.80	6.28	.74955	-.40	-1.61	26	
15	5	-3	1	8.49	7.96	.70	7.93	.73129	.53	1.66	84	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
15	5	-1	1	33.27	33.64	-33.24	5.19	.69634	-.37	-1.13	171	
15	5	1	1	48.54	48.55	12.01	47.04	.69650	-.01	-.01	75	
15	5	3	1	13.46	13.55	5.88	12.20	.73173	-.09	-.37	64	
15	6	-2	1	13.84	13.89	-1.73	13.78	.72460	-.05	-.21	97	
15	6	0	1	14.22	14.39	11.20	9.03	.70725	-.17	-.73	38	
15	6	2	1	18.74	19.56	-17.52	-8.70	.72490	-.82	-3.79	207	
15	7	-1	1	16.10	15.46	-13.61	-7.33	.72920	.65	2.86	209	
15	7	1	1	5.86	5.76	5.02	-2.83	.72935	.09	.23	331	
15	8	0	1	19.46	20.35	16.58	-11.79	.74488	-.89	-4.00	325	
16	0	-2	1	55.49	56.04	27.19	-49.00	.71694	-.55	-1.19	300	
16	0	0	1	38.75	39.67	-12.70	37.58	.69941	-.91	-2.45	108	
16	0	2	1	50.69	50.70	36.77	34.91	.71726	-.01	-.03	43	
16	1	-3	1	33.16	32.65	-7.63	31.74	.73970	.51	1.68	103	
16	1	-1	1	25.03	24.73	24.63	2.22	.70518	.30	1.31	5	
16	1	1	1	34.83	35.53	7.88	-34.65	.70534	-.70	-2.13	283	
16	1	3	1	15.70	15.71	-15.70	-.45	.74017	-.01	-.05	182	
16	2	-2	1	60.96	59.94	-59.72	-5.17	.72236	1.02	1.59	185	
15	2	0	1	37.98	38.11	-34.12	16.98	.70497	-.12	-.38	153	
16	2	2	1	15.25	14.99	14.99	.53	.72268	.26	1.12	2	
16	3	-3	1	13.58	13.29	-9.70	9.08	.75018	.29	1.18	136	
16	3	-1	1	34.89	34.81	34.24	6.29	.71616	.08	.24	10	
16	3	1	1	24.93	24.81	6.77	-23.87	.71633	.12	.53	286	
16	3	3	1	31.71	32.21	-32.20	1.05	.75064	-.50	-1.77	178	
16	4	-2	1	33.86	33.59	16.77	-29.10	.73840	.27	.89	300	
16	4	0	1	35.00	34.75	-12.53	32.41	.72139	.25	.83	111	
16	4	2	1	44.62	44.94	30.71	32.80	.73871	-.32	-.83	46	
16	5	-1	1	13.32	13.06	11.75	5.69	.73764	.26	1.05	25	
16	5	1	1	16.76	16.47	-4.94	-15.71	.73780	.29	1.31	253	
16	6	0	1	31.78	31.39	-30.60	6.96	.74796	.40	1.41	167	
17	1	-1	1	8.06	7.96	5.68	5.58	.74855	.10	.29	44	
17	1	1	1	16.77	16.14	.03	16.14	.74871	.63	2.75	89	

REFLECTION STATISTICS

NUMBER OF ATOMS IN THE ASYMMETRIC UNIT	20
NUMBER OF REFLECTIONS	1487
NUMBER OF OBSERVED REFLECTIONS	1477
NUMBER OF LESS-THAN REFLECTIONS	10
NUMBER OF REFLECTIONS IGNORED	0
REFLECTIONS WHERE FO/FC LIES OUTSIDE THE 0.1 TO 10.0 RANGE	0
OVERALL LINEAR SCALING RATIO	.9997
SLOPE OF LN(FO/FC) VS (SIN(THETA)/LAMBDA)**2	.0276

SCALE GROUP	NUMBER OF REFLECTIONS	OLD F(RELATIVE) SCALE FACTORS	NEW F(RELATIVE) SCALE FACTORS	R-VALUES
1	1487	.1728	.1727	.01675

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*                          *
*  R(OVERALL) =    .01675  *
*                          *
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PREDICTED R VALUE OF .01621 IF OVERALL LEASTSQUARES SCALE OF

FC COMPLETED

INTERCHANGED NFILEA = 8 NFILEB = 9.

***************STORE REQUIREMENTS IN WORDS***************

CURRENT PROGRAM	PREVIOUS PROGRAM	CURRENT SIZE OF DATA ARRAY	REQUIRED SIZE OF DATA ARRAY	MAXIMUM SIZE OF DATA ARRAY SO FAR	TOTAL CORE CURRENTLY AVAILABLE	LARGEST AMOUNT CORE USED SO FAR
FC	FC	2000	518	518	047700	051524

TIME	ELAPSED TIME	DATE
.71 MIN	.67 MIN	02/21/78

FC CARD INPUT

TEMPERATURE FACTOR TYPE	LIST REFLECTIONS	DISPERSION CORRECTION	REFLECTION SURVEY	PARTIAL CONTRIBUTION	DIFFRACTION TYPE	UPDATE SCALE FACTORS
MIXD	YES	YES	NO	NO	XRAY	NO

INPUT BINARY DATA FILE IS FOR HILGAR. IT HAS BEEN UPDATED 3 TIMES.
THE FILE IS LABELED - (NO FILE LABEL)
THE PROGRAMS WHICH HAVE UPDATED AND/OR COPIED THIS FILE ARE..
DATRON LOADAT FC

ISOTROPIC EXTINCTION CORRECTION 0.

SIN(THETA)/LAMBDA RANGE		MAXIMUM H K L
0.000	.985	24 23 13

SCALE FACTORS
1 .17280

INDIVIDUAL ATOM PARAMETERS **** THERMAL VALUES LISTED ARE MULTIPLIED BY 100****

ATOM	X	Y	Z	POP. PAR.	MULT.	U OR U11	U22	U33	U12	U13	U23
CA 1	0.000000	.250230	0.000000	1.000000	1.000	1.07090	1.15730	.72960	.04660	.02430	-.06630
CA 2	.273460	.470810	.841440	1.000000	1.000	1.01060	.92070	.61090	.11050	.01590	.12420
CL	.023850	.491690	.900540	1.000000	1.000	1.21710	1.23450	2.02161	-.00380	-.17450	-.12570
B 1	.260440	.195120	.646030	1.000000	1.000	.66260	.59120	.51780	-.01170	.01590	.08220
B 2	.271010	.027970	.883310	1.000000	1.000	.90450	.60310	.66700	-.03710	-.02480	-.00680
B 3	.225230	.306470	.320750	1.000000	1.000	.55500	.55960	.51140	.07830	-.01680	.05490
B 4	.336070	.229600	.008310	1.000000	1.000	.61100	.59550	.47340	-.00940	-.00940	.04510
B 5	.060220	.257320	.541490	1.000000	1.000	.50550	.84290	.71330	.07060	-.02230	-.04820
O 1	.266840	.065180	.677890	1.000000	1.000	1.59831	.54640	.61160	-.06950	-.16390	.08980
O 2	.345780	.256540	.781280	1.000000	1.000	.69260	.76190	.47410	-.15290	-.12190	.02410
O 3	.141120	.236730	.698140	1.000000	1.000	.52150	1.39311	.69350	.22750	-.04340	.07370
O 4	.289430	.212080	.426760	1.000000	1.000	.85730	.70290	.42090	.24130	.00200	.08520

INDIVIDUAL ATOM PARAMETERS **** THERMAL VALUES LISTED ARE MULTIPLIED BY 100****

ATOM		X	Y	Z	POP. PAR.	MULT.	U OR U11	U22	U33	U12	U13	U23
O	5	.295310	.105500	.042920	1.000000	1.000	1.67221	.57480	.61960	-.24980	-.07010	-.01350
O	6	.449370	.243630	.113420	1.000000	1.000	.47960	1.64261	.69330	-.20690	-.03000	-.00550
O	7	.252760	.313840	.099090	1.000000	1.000	.88650	.83700	.46970	.28360	.11590	.04610
O	8	.247910	.416090	.446210	1.000000	1.000	1.67651	.54480	.71360	-.26710	-.03170	-.00600
O	9	.094890	.283420	.338910	1.000000	1.000	.58450	1.31651	.67340	-.05280	-.04250	.26440
O	10	.010140	.049170	.909200	1.000000	1.000	2.82441	1.31811	2.38521	.24940	.44090	.36190
H	1	.035620	.027300	.786680	1.000000	1.000	4.73000					
H	2	.041200	.495080	.521080	1.000000	1.000	5.00000					

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
0	0	2	1	115.45	126.85	76.68	-101.05	.15829	-11.40	-46.15	308	
0	0	4	1	42.62	41.63	-41.23	5.71	.31658	.99	2.72	172	
0	0	6	1	46.36	46.73	41.80	20.90	.47487	-.37	-.77	26	
0	0	8	1	9.31	9.14	9.14	-.03	.63316	.17	.69	0	
0	1	1	1	34.21	32.53	-25.84	19.76	.09064	1.68	8.90	142	
0	1	3	1	91.82	93.90	90.92	23.44	.24151	-2.07	-6.67	14	
0	1	5	1	21.21	20.19	5.63	-19.40	.39818	1.01	5.13	287	
0	1	7	1	19.58	19.32	-19.22	1.90	.55578	.27	1.51	174	
0	1	9	1	13.86	13.61	9.04	10.17	.71368	.25	1.09	48	
0	2	0	1	72.83	74.29	-74.29	.46	.08836	-1.46	-7.96	179	
0	2	2	1	128.65	138.09	-36.60	-133.15	.18128	-9.44	-35.70	255	
0	2	4	1	93.30	94.80	-90.87	-27.04	.32868	-1.50	-4.08	197	
0	2	6	1	45.75	46.64	-26.83	38.15	.48302	-.89	-1.87	125	
0	2	8	1	20.65	20.65	-20.09	-4.76	.63930	.00	.01	194	
0	3	1	1	91.80	93.35	-40.50	84.11	.15437	-1.55	-6.35	115	
0	3	3	1	53.00	54.43	46.91	27.60	.27192	-1.43	-4.27	30	
0	3	5	1	53.76	51.62	-13.76	-49.75	.41733	2.14	4.97	255	
0	3	7	1	21.46	21.17	-21.11	1.56	.56965	.29	1.48	175	
0	3	9	1	21.06	20.30	20.21	1.99	.72453	.75	3.66	5	
0	4	2	1	83.62	83.90	17.72	-82.01	.23724	-.28	-.92	283	
0	4	4	1	18.15	17.04	-15.66	6.72	.36256	1.11	6.90	156	
0	4	6	1	39.41	39.13	34.96	17.57	.50669	.28	.80	26	
0	4	8	1	30.97	30.59	30.58	-.38	.65736	.39	1.38	0	
0	5	1	1	96.19	95.08	-92.69	21.16	.23465	1.11	3.62	167	
0	5	3	1	34.97	34.67	7.67	33.81	.32430	.30	1.14	77	
0	5	5	1	36.28	37.05	36.53	6.17	.45320	-.77	-2.34	9	
0	5	7	1	15.58	15.03	13.64	-6.31	.59643	.55	2.94	336	
0	5	9	1	8.05	7.89	6.54	-4.42	.74577	.16	.50	326	
0	6	0	1	83.42	79.60	-79.60	-.22	.26507	3.82	11.70	181	
0	6	2	1	73.27	73.07	-43.00	-59.07	.30874	.20	.56	234	
0	6	4	1	84.74	85.51	-85.25	6.70	.41290	-.77	-1.81	175	
0	6	6	1	34.08	34.06	-32.42	10.45	.54384	.02	.06	162	
0	6	8	1	10.65	10.71	-4.29	-9.81	.68641	-.06	-.23	247	
0	7	1	1	74.03	74.05	-39.94	62.36	.31922	-.02	-.06	122	
0	7	3	1	25.53	25.69	.95	25.67	.38989	-.16	-.75	87	
0	7	5	1	31.88	31.76	17.04	-26.80	.50223	.12	.40	303	
0	7	7	1	12.78	12.29	-10.33	6.66	.63449	.49	2.33	147	
0	8	0	1	62.37	62.71	62.68	1.79	.35343	-.33	-.86	1	
0	8	2	1	45.46	44.15	40.88	-16.68	.38726	1.31	3.15	338	
0	8	4	1	37.55	38.92	36.69	12.98	.47449	-1.36	-4.02	19	
0	8	6	1	25.65	25.40	10.98	22.91	.59196	.25	1.13	64	
0	8	8	1	35.20	34.69	31.19	15.18	.72513	.51	1.71	25	
0	9	1	1	26.92	27.92	-4.48	27.56	.40541	-.99	-4.49	99	
0	9	3	1	48.53	48.86	4.46	48.66	.46311	-.33	-.71	84	
0	9	5	1	34.48	34.75	27.80	20.86	.56098	-.27	-.99	36	
0	9	7	1	24.29	23.87	20.50	-12.23	.68193	.42	2.20	330	
0	10	0	1	18.76	17.71	-17.69	-.94	.44179	1.04	5.93	184	
0	10	2	1	20.60	20.96	-3.33	-20.69	.46929	-.36	-1.88	261	
0	10	4	1	42.42	42.80	-41.65	-9.86	.54351	-.38	-1.02	194	
0	10	6	1	35.31	34.99	-34.97	-.91	.64860	.32	1.05	182	
0	11	1	1	17.01	17.20	-17.06	-2.13	.49237	-.18	-1.18	188	
0	11	3	1	5.77	5.07	-3.29	3.86	.54087	.70	2.47	130	
0	11	5	1	31.87	32.02	32.00	1.05	.62671	-.15	-.54	1	
0	11	7	1	14.35	14.35	-6.85	-12.61	.73695	.00	.00	242	
0	12	0	1	30.08	30.59	30.58	.79	.53015	-.51	-1.94	1	
0	12	2	1	39.43	38.92	33.90	19.11	.55327	.51	1.66	29	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
0	12	4	1	37.48	37.58	34.69	-14.45	.61748	-.10	-.34	338	
0	12	6	1	5.27	5.27	-3.97	-3.47	.71173	-.00	-.01	222	
0	13	1	1	5.66	5.00	4.26	2.62	.57975	.66	2.08	31	
0	13	3	1	18.99	19.30	.25	19.30	.62147	-.31	-1.65	89	
0	13	5	1	7.33	8.05	4.02	6.98	.69746	-.73	-2.21	60	
0	14	0	1	38.02	38.51	-38.48	-1.44	.61851	-.48	-1.43	183	
0	14	2	1	14.57	14.81	-11.88	-8.85	.63844	-.24	-1.18	217	
0	14	4	1	42.39	42.95	-15.45	-40.07	.69482	-.56	-1.76	249	
0	15	1	1	26.67	27.61	-18.67	-20.34	.66739	-.94	-4.27	228	
0	15	3	1	18.13	19.35	-19.04	3.45	.70394	-1.22	-5.73	169	
0	16	0	1	17.38	17.63	17.63	.22	.70686	-.25	-1.14	0	
0	16	2	1	33.17	34.18	14.35	31.02	.72437	-1.01	-3.68	65	
0	17	-1	1	8.07	8.61	2.39	8.27	.75520	-.54	-1.57	73	
0	17	1	1	6.89	8.54	3.58	-7.76	.75520	-1.65	-4.17	295	
1	1	-9	1	24.58	25.08	-21.88	12.26	.71497	-.50	-2.29	150	
1	1	-7	1	20.80	20.51	-2.72	20.33	.55745	.29	1.41	97	
1	1	-5	1	39.26	38.76	-5.64	38.34	.40053	.50	1.18	98	
1	1	-3	1	148.18	162.18	-60.53	150.46	.24539	-13.99	-44.99	111	
1	1	-1	1	13.35	4.81	-3.38	3.41	.10060	8.54	66.82	134	
1	1	1	1	30.54	29.27	14.85	25.22	.10067	1.27	6.33	59	
1	1	3	1	15.87	16.09	12.26	10.42	.24548	-.22	-1.40	40	
1	1	5	1	22.36	21.85	21.84	-.55	.40062	.51	2.60	359	
1	1	7	1	29.55	29.05	-10.82	26.96	.55754	.50	1.82	111	
1	1	9	1	34.15	33.91	-24.93	22.99	.71506	.24	.81	137	
1	2	-8	1	27.76	28.41	-2.64	28.29	.64075	-.65	-2.56	95	
1	2	-6	1	14.87	15.00	-.35	14.99	.48495	-.12	-.76	91	
1	2	-4	1	33.00	32.20	-22.72	-22.82	.3[illegible]3	.79	2.98	226	
1	2	-2	1	44.28	44.36	-14.38	41.97	.18644	-.09	-.32	108	
1	2	0	1	14.72	13.36	5.39	-12.23	.09858	1.36	9.06	294	
1	2	2	1	54.84	53.85	-2.73	-53.78	.18652	.99	3.64	268	
1	2	4	1	23.54	22.56	-7.36	21.32	.33162	.99	4.32	109	
1	2	6	1	22.06	21.57	3.68	-21.25	.48504	.49	2.59	280	
1	2	8	1	28.39	27.70	.14	-27.70	.64084	.69	2.75	271	
1	3	-9	1	23.65	24.21	23.06	-7.36	.72581	-.56	-2.75	343	
1	3	-7	1	30.62	30.43	-5.88	-29.86	.57128	.19	.67	259	
1	3	-5	1	13.08	13.64	.35	13.64	.41957	-.56	-3.75	88	
1	3	-3	1	95.93	100.04	30.79	-95.19	.27537	-4.11	-12.38	288	
1	3	-1	1	40.58	39.84	-26.77	-29.51	.16042	.74	2.93	228	
1	3	1	1	34.75	34.05	-17.45	29.24	.16046	.70	2.77	120	
1	3	3	1	63.01	62.77	22.79	-58.49	.27545	.24	.72	292	
1	3	5	1	79.65	81.21	4.73	-81.07	.41966	-1.55	-3.61	274	
1	3	7	1	33.43	34.31	-13.87	-31.38	.57137	-.88	-2.75	247	
1	3	9	1	22.95	23.04	17.99	-14.40	.72590	-.09	-.43	322	
1	4	-8	1	9.36	9.75	-6.43	7.32	.65877	-.38	-1.50	131	
1	4	-6	1	14.74	15.04	6.65	13.50	.50853	-.30	-1.85	63	
1	4	-4	1	7.59	7.81	4.29	6.53	.36515	-.22	-1.28	56	
1	4	-2	1	67.66	64.52	-13.74	63.04	.24121	3.14	10.14	102	
1	4	0	1	36.69	36.50	11.02	34.80	.18204	.19	.70	72	
1	4	2	1	71.27	67.93	42.40	-53.08	.24127	3.34	10.80	309	
1	4	4	1	30.65	30.66	-9.95	-29.21	.36523	-.20	-.71	252	
1	4	6	1	11.86	11.22	11.12	-1.51	.50861	.64	3.55	353	
1	4	8	1	9.50	9.73	5.34	-8.13	.65886	-.23	-.90	304	
1	5	-9	1	19.21	19.38	.38	19.37	.74701	-.17	-.78	88	
1	5	-7	1	15.84	15.63	-15.10	4.04	.59799	.21	1.14	165	
1	5	-5	1	42.17	41.85	-13.89	39.48	.45527	.32	.98	109	
1	5	-3	1	75.25	73.30	-13.58	72.03	.32720	1.95	5.31	100	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
1	5	-1	1	42.69	41.34	-20.20	-36.07	.23867	1.35	4.34	241	
1	5	1	1	115.81	116.95	13.02	116.23	.23870	-1.15	-3.74	83	
1	5	3	1	75.18	75.39	60.34	45.20	.32727	-.21	-.57	36	
1	5	5	1	18.83	18.88	6.91	-17.57	.45535	-.05	-.30	292	
1	5	7	1	47.15	[illegible].12	-33.73	32.90	.59807	.03	.07	135	
1	5	9	1	20.03	19.49	-8.82	17.38	.74710	.53	2.51	116	
1	6	-8	1	27.72	28.46	-6.65	27.67	.68776	-.74	-3.03	103	
1	6	-6	1	23.81	24.28	23.41	-6.43	.54556	-.47	-2.24	345	
1	6	-4	1	64.50	64.75	-17.57	-62.32	.41517	-.26	-.59	255	
1	6	-2	1	30.92	30.33	-10.79	28.35	.31180	.59	2.25	110	
1	6	0	1	33.90	33.29	32.60	-6.74	.26865	.61	1.81	349	
1	6	2	1	45.18	43.49	-18.92	-39.16	.31184	1.69	4.67	245	
1	6	4	1	74.00	74.65	-12.71	73.56	.41524	-.65	-1.51	99	
1	6	6	1	20.42	20.60	20.29	3.56	.54564	-.17	-.93	9	
1	6	8	1	34.41	34.30	-4.52	-34.01	.68784	.11	.37	263	
1	7	-7	1	52.39	52.63	2.53	-52.57	.63595	-.24	-.57	273	
1	7	-5	1	12.53	12.73	7.68	-10.16	.50409	-.20	-1.17	308	
1	7	-3	1	76.82	76.90	36.26	-67.81	.39230	-.08	-.20	299	
1	7	-1	1	30.49	29.94	-17.23	-24.49	.32219	.54	2.04	235	
1	7	1	1	33.59	32.26	-23.10	22.51	.32221	1.33	4.99	135	
1	7	3	1	36.99	36.83	35.47	-9.94	.39236	.16	.54	345	
1	7	5	1	65.47	65.19	19.67	-62.15	.50417	.27	.56	288	
1	7	7	1	29.42	28.79	-24.10	-15.76	.63603	.62	2.27	214	
1	8	-8	1	15.70	16.58	-13.22	10.02	.72640	-.89	-3.95	142	
1	8	-6	1	21.75	21.93	21.81	-2.30	.59354	-.18	-.92	354	
1	8	-4	1	19.46	19.88	3.69	-19.54	.47647	-.42	-2.29	281	
1	8	-2	1	17.52	17.29	-9.72	14.29	.38970	.24	1.35	124	
1	8	0	1	52.10	51.53	47.33	20.25	.35612	.57	1.47	23	
1	8	2	1	5.62	4.34	3.53	-2.54	.38974	1.28	5.91	325	
1	8	4	1	33.43	32.40	-29.78	12.76	.47653	1.03	3.68	156	
1	8	6	1	36.70	36.03	23.17	27.59	.59361	.68	2.07	49	
1	8	8	1	11.32	11.73	3.33	-11.25	.72648	-.41	-1.57	287	
1	9	-7	1	14.56	14.35	-13.13	5.79	.68329	.22	1.00	156	
1	9	-5	1	23.65	23.23	-12.86	19.34	.56264	.43	1.83	123	
1	9	-3	1	27.01	26.36	22.61	13.55	.46514	.65	2.68	30	
1	9	-1	1	60.26	60.89	-54.74	-26.66	.40775	-.63	-1.48	206	
1	9	1	1	87.63	89.14	-30.00	83.94	.40777	-1.51	-3.58	109	
1	9	3	1	84.64	86.46	65.12	56.88	.46519	-1.82	-3.97	41	
1	9	5	1	11.01	10.97	-9.71	5.11	.56271	.04	.19	152	
1	9	7	1	40.67	40.51	-24.38	32.36	.68337	.15	.42	127	
1	10	-6	1	28.80	29.01	29.01	-.57	.65004	-.21	-.82	359	
1	10	-4	1	21.12	21.40	-14.56	-15.68	.54524	-.28	-1.38	228	
1	10	-2	1	23.94	24.10	-23.85	3.46	.47131	-.16	-.71	171	
1	10	0	1	18.60	18.62	6.68	-17.38	.44395	-.02	-.09	292	
1	10	2	1	57.54	57.51	-44.18	-36.81	.47134	.03	.07	220	
1	10	4	1	36.36	35.67	-18.70	30.38	.54529	.69	2.23	121	
1	10	6	1	36.34	36.83	33.67	14.91	.65010	-.49	-1.59	23	
1	11	-7	1	23.60	24.13	-3.19	-23.92	.73821	-.53	-2.45	263	
1	11	-5	1	13.66	13.44	-13.07	-3.12	.62820	.22	1.08	194	
1	11	-3	1	36.89	37.71	17.61	-33.34	.54261	-.82	-2.67	298	
1	11	-1	1	23.30	24.29	-17.74	-16.59	.49430	-.99	-4.30	224	
1	11	1	1	26.98	27.44	-24.92	-11.47	.49432	-.45	-1.80	205	
1	11	3	1	23.51	23.52	19.42	-13.26	.54265	-.01	-.03	326	
1	11	5	1	60.32	59.18	6.35	-58.84	.62826	1.14	1.97	277	
1	11	7	1	39.23	38.97	-19.94	-33.48	.73828	.26	.78	240	
1	12	-6	1	18.56	18.67	13.57	12.83	.71304	-.11	-.53	43	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
1	12	-4	1	4.03	1.57	.01	1.57	.61900	2.46	5.37	89	
1	12	-2	1	11.48	10.99	-1.98	10.81	.55499	.49	2.49	100	
1	12	0	1	33.96	33.57	32.55	-8.22	.53195	.39	1.27	346	
1	12	2	1	25.03	25.17	-22.42	-11.45	.55501	-.14	-.67	208	
1	12	4	1	28.90	29.48	-28.48	7.62	.61905	-.59	-2.38	165	
1	12	6	1	27.64	27.94	23.35	15.36	.71310	-.31	-1.35	33	
1	13	-5	1	24.63	25.86	1.81	25.79	.69880	-1.22	-5.66	85	
1	13	-3	1	25.19	24.59	14.28	20.01	.62299	.61	2.82	54	
1	13	-1	1	35.30	35.90	-35.89	-.18	.58139	-.59	-1.83	181	
1	13	1	1	40.76	42.00	-20.01	36.92	.58141	-1.24	-3.85	118	
1	13	3	1	45.25	45.13	40.25	20.40	.62302	.12	.29	26	
1	13	5	1	2.99	1.10	-.64	.89	.69885	1.89	2.73	125	
1	14	-4	1	13.85	13.65	-3.15	13.28	.69617	.20	.88	103	
1	14	-2	1	7.53	7.31	6.37	-3.57	.63992	.22	.73	331	
1	14	0	1	21.66	21.64	13.58	-16.85	.62005	.02	.09	309	
1	14	2	1	31.80	31.81	-14.88	-28.11	.63995	-.01	-.04	243	
1	14	4	1	14.87	14.70	-14.44	2.72	.69621	.17	.77	169	
1	15	-3	1	24.04	24.51	13.05	-20.75	.70528	-.47	-2.39	303	
1	15	-1	1	14.32	14.52	8.78	-11.57	.66882	-.21	-.92	308	
1	15	1	1	9.70	10.51	7.13	-7.72	.66883	-.81	-3.02	313	
1	15	3	1	17.27	17.63	12.02	-12.89	.70531	-.36	-1.70	313	
1	16	-2	1	25.16	25.44	23.71	9.20	.72568	-.27	-1.21	21	
1	16	0	1	16.73	17.36	12.03	-12.51	.70821	-.63	-2.86	314	
1	16	2	1	8.50	9.34	-9.20	-1.62	.72570	-.84	-2.62	191	
1	17	-1	1	12.07	11.93	-1.08	11.88	.75646	.14	.52	95	
1	17	1	1	29.13	29.03	8.40	27.79	.75647	.10	.40	73	
2	0	-8	1	52.51	53.84	38.99	-37.13	.63908	-1.33	-3.20	317	
2	0	-6	1	6.89	8.36	1.83	-8.16	.48276	-1.47	-6.33	283	
2	0	-4	1	28.99	29.17	19.45	21.74	.32834	-.18	-.67	48	
2	0	-2	1	71.24	74.06	73.86	-5.39	.18075	-2.82	-10.67	356	
2	0	0	1	70.59	71.35	-66.98	-24.58	.08743	-.77	-4.22	201	
2	0	2	1	98.23	100.64	97.89	-23.35	.18091	-2.40	-9.09	347	
2	0	4	1	75.65	74.19	66.15	-33.60	.32852	1.46	3.94	334	
2	0	6	1	39.27	38.78	-37.37	10.36	.48294	.49	1.43	164	
2	0	8	1	54.68	53.38	49.58	19.80	.63926	1.29	3.13	21	
2	1	-9	1	29.20	29.50	-29.09	4.92	.71892	-.30	-1.24	170	
2	1	-7	1	35.94	36.51	10.17	35.06	.56252	-.56	-1.80	73	
2	1	-5	1	36.05	35.26	34.36	-7.89	.40758	.80	2.62	348	
2	1	-3	1	82.33	82.31	-66.79	-48.10	.25676	.02	.07	216	
2	1	-1	1	28.24	27.91	-24.26	-13.81	.12588	.33	1.46	210	
2	1	1	1	7.79	7.40	6.20	4.04	.12599	.39	4.17	33	
2	1	3	1	71.08	70.78	-70.74	2.37	.25693	.31	.95	178	
2	1	5	1	40.72	39.53	25.14	30.50	.40776	1.19	2.80	50	
2	1	7	1	44.15	43.95	39.74	-18.76	.56270	.20	.53	335	
2	1	9	1	32.69	32.83	-18.00	-27.46	.71910	-.14	-.51	237	
2	2	-8	1	22.39	22.83	3.25	-22.60	.64516	-.44	-2.17	279	
2	2	-6	1	103.27	108.70	-106.62	-21.16	.49078	-5.43	-11.34	192	
2	2	-4	1	73.27	73.17	-47.84	55.37	.34002	.10	.26	130	
2	2	-2	1	53.63	53.33	-22.47	48.36	.20119	.30	1.07	114	
2	2	0	1	54.30	51.46	-51.35	-3.37	.12430	2.84	13.04	184	
2	2	2	1	24.00	24.15	-22.88	7.73	.20133	-.15	-.74	161	
2	2	4	1	50.27	49.64	-27.15	-41.56	.34019	.63	1.65	237	
2	2	6	1	68.02	68.26	-53.94	-41.83	.49096	-.24	-.50	218	
2	2	8	1	66.59	66.16	-42.45	50.74	.64534	.43	.74	129	
2	3	-9	1	35.50	36.35	-35.71	6.81	.72970	-.85	-2.83	169	
2	3	-7	1	33.46	33.60	16.14	29.47	.57623	-.14	-.44	61	

H	K	L	GPP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
2	3	-5	1	61.19	62.65	59.03	-20.99	.42631	-1.46	-3.35	341	
2	3	-3	1	14.68	15.09	-3.63	-14.65	.28556	-.41	-3.07	257	
2	3	-1	1	20.82	20.41	-6.43	19.37	.17737	.41	2.10	108	
2	3	1	1	65.24	63.12	-52.48	-35.07	.17745	2.12	8.07	214	
2	3	3	1	37.33	37.54	-30.26	22.21	.28571	-.21	-.60	143	
2	3	5	1	65.95	67.09	45.47	49.34	.42648	-1.14	-2.62	47	
2	3	7	1	30.03	29.00	24.04	-16.21	.57641	1.03	4.10	327	
2	3	9	1	28.50	28.23	-23.68	-15.36	.72988	.27	1.10	213	
2	4	-8	1	40.91	42.69	24.80	-34.75	.66306	-1.78	-5.06	306	
2	4	-6	1	17.96	18.33	17.57	-5.22	.51409	-.37	-2.12	344	
2	4	-4	1	27.05	26.80	16.10	21.43	.37288	.24	1.01	53	
2	4	-2	1	110.47	110.17	109.39	-13.12	.25278	.30	.95	354	
2	4	0	1	92.70	91.68	91.42	6.88	.19716	1.02	3.68	4	
2	4	2	1	98.80	99.14	94.74	29.22	.25290	-.34	-1.08	17	
2	4	4	1	52.01	50.53	45.40	-22.17	.37303	1.48	3.71	334	
2	4	6	1	34.59	34.64	-34.22	5.37	.51426	-.05	-.15	171	
2	4	8	1	25.14	24.80	21.10	13.04	.66324	.34	1.48	31	
2	5	-9	1	23.88	24.31	-21.72	-10.93	.75079	-.44	-2.03	207	
2	5	-7	1	31.15	31.26	-5.61	30.76	.60272	-.11	-.40	100	
2	5	-5	1	22.10	21.62	21.62	-.25	.46148	.48	2.38	0	
2	5	-3	1	42.08	42.14	10.60	-40.79	.33581	-.06	-.16	285	
2	5	-1	1	20.74	18.08	15.77	8.84	.25037	2.67	13.65	29	
2	5	1	1	78.42	74.13	71.36	20.09	.25043	4.29	13.56	15	
2	5	3	1	24.75	25.86	-14.66	21.31	.33594	-1.11	-4.91	124	
2	5	5	1	16.24	15.76	-8.39	13.35	.46164	.48	3.07	122	
2	5	7	1	30.82	30.02	17.18	-24.61	.60289	.80	2.77	305	
2	5	9	1	33.49	33.17	-25.50	-21.22	.75097	.31	1.01	220	
2	6	-8	1	23.84	24.66	-16.32	-18.49	.69187	-.82	-3.61	229	
2	6	-6	1	60.58	61.62	-57.41	-22.39	.55075	-1.04	-1.99	202	
2	6	-4	1	48.86	48.76	-8.24	48.06	.42199	.10	.22	99	
2	6	-2	1	43.05	42.60	-26.87	33.06	.32083	.45	1.22	129	
2	6	0	1	32.29	32.10	-26.79	17.69	.27912	.19	.56	146	
2	6	2	1	28.39	27.52	-21.36	-17.35	.32092	.87	3.25	220	
2	6	4	1	49.87	50.14	-20.51	-45.75	.42212	-.27	-.62	246	
2	6	6	1	31.84	31.10	-30.90	-3.51	.55091	.74	2.36	187	
2	6	8	1	57.18	56.71	-45.54	33.79	.69204	.47	1.07	143	
2	7	-7	1	33.11	33.54	9.68	32.12	.64040	-.44	-1.44	73	
2	7	-5	1	30.24	30.30	29.96	-4.53	.50971	-.06	-.20	352	
2	7	-3	1	36.03	36.76	34.03	-13.89	.39952	-.73	-2.40	338	
2	7	-1	1	15.09	14.64	-11.47	-9.09	.33095	.44	2.99	219	
2	7	1	1	66.86	67.82	-64.93	-19.58	.33100	-.95	-2.56	197	
2	7	3	1	38.68	39.80	12.64	37.73	.39962	-1.12	-2.61	71	
2	7	5	1	37.41	38.26	28.55	25.46	.50986	-.85	-2.38	41	
2	7	7	1	26.17	25.37	12.20	-22.24	.64056	.80	3.37	299	
2	8	-8	1	19.10	19.43	16.71	-9.92	.73030	-.33	-1.57	330	
2	8	-6	1	31.72	30.93	30.18	6.75	.59831	.79	2.74	12	
2	8	-4	1	26.84	27.11	-24.76	11.03	.48241	-.26	-1.06	155	
2	8	-2	1	44.54	43.78	43.35	-6.06	.39697	.76	1.83	353	
2	8	0	1	95.92	95.71	95.70	-1.45	.36408	.21	.54	0	
2	8	2	1	42.46	41.61	39.30	13.67	.39704	.85	1.99	19	
2	8	4	1	28.08	27.05	17.41	-20.69	.48253	1.04	4.23	311	
2	8	6	1	9.31	8.48	.00	-8.48	.59845	.83	3.51	271	
2	8	8	1	15.28	15.44	15.35	-1.63	.73046	-.16	-.67	354	
2	9	-7	1	20.51	20.04	-9.83	17.46	.68744	.47	2.30	119	
2	9	-5	1	12.66	12.29	11.97	2.78	.56768	.37	1.88	13	
2	9	-3	1	22.26	23.00	10.80	-20.31	.47124	-.75	-3.32	299	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
2	9	-1	1	51.60	52.59	-50.36	-15.14	.41471	-.99	-2.29	197	
2	9	1	1	17.03	17.89	-15.82	-8.36	.41475	-.87	-5.39	208	
2	9	3	1	11.25	10.80	2.17	10.58	.47134	.45	2.60	78	
2	9	5	1	13.22	12.56	11.81	-4.29	.56781	.66	3.47	341	
2	9	7	1	22.35	21.97	11.92	-18.46	.68759	.38	1.94	303	
2	10	-6	1	29.26	28.90	-25.01	-14.48	.65440	.36	1.27	211	
2	10	-4	1	21.35	20.89	-20.80	-1.95	.55044	.46	2.25	186	
2	10	-2	1	65.72	66.20	-64.63	14.32	.47733	-.48	-1.02	167	
2	10	0	1	41.90	42.48	-41.14	10.55	.45036	-.58	-1.77	165	
2	10	2	1	52.80	52.20	-33.68	-39.89	.47740	.60	1.27	230	
2	10	4	1	42.16	41.82	-37.76	-17.97	.55055	.35	.93	206	
2	10	6	1	16.42	16.32	-3.23	15.99	.65453	.11	.52	101	
2	11	-7	1	11.46	11.06	8.08	7.54	.74205	.41	1.54	43	
2	11	-5	1	14.01	14.17	-.23	14.17	.63272	-.16	-.79	90	
2	11	-3	1	29.72	30.14	17.75	-24.36	.54785	-.43	-1.56	307	
2	11	-1	1	45.08	45.27	-15.37	-42.58	.50006	-.19	-.39	251	
2	11	1	1	60.31	61.87	-55.50	27.34	.50009	-1.55	-3.17	153	
2	11	3	1	38.96	39.57	12.57	37.53	.54793	-.61	-1.63	71	
2	11	5	1	11.85	12.05	12.05	-.02	.63284	-.21	-.93	0	
2	11	7	1	8.79	8.85	8.59	-2.12	.74219	-.06	-.20	347	
2	12	-6	1	35.19	35.68	34.02	-10.77	.71702	-.49	-1.66	343	
2	12	-4	1	17.78	17.93	-13.37	-11.95	.62359	-.15	-.80	222	
2	12	-2	1	34.85	34.54	19.88	28.24	.56011	.31	.99	54	
2	12	0	1	57.97	58.05	57.69	6.49	.53731	-.08	-.16	6	
2	12	2	1	30.50	30.76	29.41	-9.04	.56016	-.26	-.95	343	
2	12	4	1	9.46	9.14	6.58	6.35	.62368	.32	1.32	43	
2	12	6	1	13.90	14.30	10.22	10.01	.71714	-.41	-1.73	44	
2	13	-5	1	14.46	14.41	14.30	-1.77	.70287	.05	.20	353	
2	13	-3	1	23.24	23.62	20.84	-11.12	.62756	-.38	-1.93	332	
2	13	-1	1	36.29	36.73	-25.31	-26.62	.58630	-.44	-1.35	227	
2	13	1	1	26.10	25.77	-23.63	10.29	.58632	.33	1.38	156	
2	13	3	1	25.23	25.85	2.78	25.70	.62763	-.62	-2.85	83	
2	13	5	1	17.82	18.46	18.45	-.69	.70297	-.64	-2.98	358	
2	14	-4	1	41.04	41.12	-23.20	-33.95	.70026	-.08	-.21	236	
2	14	-2	1	43.22	43.46	-38.91	19.37	.64438	-.24	-.58	153	
2	14	0	1	17.94	17.82	7.20	16.30	.62465	.12	.62	66	
2	14	2	1	36.36	36.58	-14.31	-33.66	.64442	-.22	-.72	247	
2	14	4	1	53.31	53.50	-51.41	14.81	.70034	-.19	-.43	163	
2	15	-3	1	18.34	18.69	18.66	-1.05	.70931	-.35	-1.62	357	
2	15	-1	1	27.55	28.02	8.19	-26.79	.67309	-.47	-1.88	287	
2	15	1	1	38.81	39.38	-21.31	33.12	.67311	-.57	-1.84	122	
2	15	3	1	22.99	22.99	19.04	12.89	.70938	-.00	-.01	34	
2	16	-2	1	49.27	48.54	19.84	44.30	.72961	.73	1.95	65	
2	16	0	1	42.69	43.79	42.83	9.12	.71225	-1.10	-2.93	12	
2	16	2	1	44.63	44.91	36.08	-26.73	.72965	-.27	-.71	324	
3	1	-9	1	39.33	40.20	-7.08	39.58	.72549	-.87	-2.62	100	
3	1	-7	1	22.65	22.61	11.19	19.65	.57090	.04	.20	60	
3	1	-5	1	28.36	28.58	18.70	21.62	.41909	-.22	-.85	49	
3	1	-3	1	11.10	11.58	1.97	11.41	.27470	-.48	-4.01	80	
3	1	-1	1	84.37	87.59	-27.79	83.06	.15935	-3.21	-13.00	108	
3	1	1	1	80.24	82.46	24.82	78.64	.15948	-2.22	-8.99	72	
3	1	3	1	52.63	51.69	-11.03	50.50	.27494	.95	2.84	102	
3	1	5	1	110.24	112.63	-6.71	112.43	.41935	-2.38	-5.56	93	
3	1	7	1	25.48	25.93	-3.76	25.66	.57117	-.45	-1.94	98	
3	1	9	1	12.81	12.62	.77	12.59	.72576	.19	.78	86	
3	2	-8	1	28.83	29.33	11.74	-26.88	.65248	-.51	-1.98	294	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
3	2	-6	1	19.89	20.47	7.25	-19.15	.50038	-.58	-3.48	291	
3	2	-4	1	15.62	15.27	2.67	15.03	.35375	.35	2.38	79	
3	2	-2	1	5.08	3.80	-3.78	.34	.22365	1.28	8.83	174	
3	2	0	1	37.83	36.13	-6.26	35.58	.15813	1.70	6.78	99	
3	2	2	1	47.74	46.26	-4.94	46.00	.22384	1.48	4.95	96	
3	2	4	1	12.74	12.36	9.78	-7.55	.35400	.38	2.86	323	
3	2	6	1	12.33	12.27	-1.02	12.23	.50064	.07	.38	94	
3	2	8	1	20.24	20.07	-8.42	18.21	.65274	.18	.88	114	
3	3	-9	1	41.28	41.65	13.81	-39.30	.73617	-.38	-1.13	290	
3	3	-7	1	16.22	16.22	12.05	-10.87	.58442	-.00	-.02	318	
3	3	-5	1	86.42	88.13	1.60	-88.11	.43733	-1.71	-3.87	272	
3	3	-3	1	57.73	59.04	-22.02	-54.78	.30179	-1.31	-3.73	249	
3	3	-1	1	21.60	20.07	-14.41	13.97	.20250	1.53	7.27	135	
3	3	1	1	46.20	45.38	15.06	-42.81	.20261	.82	2.88	290	
3	3	3	1	11.22	10.36	6.55	-8.02	.30200	.87	7.16	310	
3	3	5	1	60.24	60.96	-22.09	-56.82	.43757	-.72	-1.62	249	
3	3	7	1	37.23	36.62	17.03	-32.42	.58468	.61	1.90	298	
3	3	9	1	23.25	23.14	-3.60	-22.86	.73644	.11	.52	262	
3	4	-8	1	15.11	15.78	11.76	-10.53	.67018	-.67	-3.11	319	
3	4	-6	1	21.73	21.49	-11.00	-18.47	.52326	.24	1.16	240	
3	4	-4	1	10.64	10.51	-4.42	9.54	.38544	.12	.83	114	
3	4	-2	1	75.68	73.67	21.79	-70.37	.27100	2.01	6.09	288	
3	4	0	1	22.93	22.39	-22.38	-.63	.22006	.55	2.51	182	
3	4	2	1	81.30	78.71	-31.24	72.24	.27116	2.60	7.87	113	
3	4	4	1	20.15	19.26	18.44	5.57	.38566	.89	4.97	16	
3	4	6	1	19.18	19.20	-18.87	-3.54	.52351	-.02	-.10	191	
3	4	8	1	11.53	11.46	-5.23	10.19	.67044	.07	.32	117	
3	5	-9	1	35.44	35.63	-19.98	29.50	.75709	-.19	-.63	124	
3	5	-7	1	36.84	37.96	25.55	28.07	.61055	-1.12	-3.36	47	
3	5	-5	1	24.56	24.59	24.40	-3.05	.47168	-.03	-.14	353	
3	5	-3	1	51.47	51.49	-47.15	20.70	.34972	-.03	-.07	156	
3	5	-1	1	130.49	131.27	-51.92	120.57	.26876	-.78	-2.39	113	
3	5	1	1	48.63	48.43	37.19	31.03	.26885	.20	.60	39	
3	5	3	1	6.80	6.39	-3.26	5.50	.34990	.41	2.38	120	
3	5	5	1	88.80	88.77	8.99	88.32	.47191	.02	.05	84	
3	5	7	1	21.57	21.53	13.12	17.08	.61080	.03	.17	52	
3	5	9	1	23.00	22.91	-13.15	18.75	.75734	.09	.44	125	
3	6	-8	1	26.69	27.75	12.44	-24.80	.69870	-1.06	-4.51	297	
3	6	-6	1	22.47	22.94	-22.20	-5.79	.55932	-.47	-2.35	195	
3	6	-4	1	45.76	45.33	-16.25	42.31	.43313	.43	.98	111	
3	6	-2	1	10.41	10.21	.13	10.21	.33537	.20	1.43	89	
3	6	0	1	15.77	15.18	-13.56	-6.82	.29574	.60	3.83	207	
3	6	2	1	22.30	21.44	13.19	16.91	.33550	.86	4.36	52	
3	6	4	1	45.19	44.65	23.00	-38.27	.43333	.55	1.23	302	
3	6	6	1	10.43	10.37	-5.46	-8.82	.55955	.05	.25	239	
3	6	8	1	28.67	28.27	-6.23	27.58	.69895	.39	1.59	102	
3	7	-7	1	20.23	20.02	3.87	19.64	.64778	.21	1.10	78	
3	7	-5	1	66.36	67.58	-.86	-67.57	.51897	-1.22	-2.43	270	
3	7	-3	1	75.10	74.68	-50.36	-55.14	.41127	.41	.97	228	
3	7	-1	1	9.41	8.69	-6.01	6.27	.34508	.72	5.05	133	
3	7	1	1	69.43	68.97	44.88	-52.37	.34514	.46	1.21	311	
3	7	3	1	52.36	51.03	-6.12	-50.66	.41143	1.33	3.11	264	
3	7	5	1	48.60	49.18	-24.63	-42.57	.51918	-.58	-1.15	240	
3	7	7	1	47.85	47.67	27.04	-39.26	.64801	.17	.41	305	
3	8	-8	1	15.17	15.73	10.00	-12.14	.73677	-.56	-2.40	310	
3	8	-6	1	34.02	34.54	-34.52	-1.25	.60621	-.52	-1.56	183	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
3	8	-4	1	42.56	42.70	3.49	42.56	.49219	-.14	-.40	85	
3	8	-2	1	54.42	52.84	37.47	-37.26	.40881	1.58	3.73	316	
3	8	0	1	49.43	48.17	-37.36	-30.41	.37698	1.26	3.10	220	
3	8	2	1	12.99	12.25	-9.03	8.28	.40891	.74	4.97	137	
3	8	4	1	37.22	36.83	26.29	-25.80	.49236	.39	1.11	316	
3	8	6	1	28.78	28.62	-21.19	-19.24	.60642	.15	.58	223	
3	8	8	1	18.35	18.09	3.90	17.66	.73701	.26	1.21	77	
3	9	-7	1	29.14	30.20	20.53	22.14	.69432	-1.06	-3.89	47	
3	9	-5	1	25.08	24.61	20.68	13.35	.57601	.46	1.98	32	
3	9	-3	1	58.25	58.01	-50.10	29.23	.48125	.24	.51	149	
3	9	-1	1	81.22	80.71	-1.86	80.69	.42607	.51	1.17	91	
3	9	1	1	57.19	57.53	50.94	26.74	.42612	-.34	-.79	27	
3	9	3	1	21.50	21.55	-7.51	-20.20	.48139	-.05	-.25	250	
3	9	5	1	46.61	45.10	17.77	41.46	.57619	1.51	3.92	66	
3	9	7	1	16.36	16.08	4.75	15.36	.69453	.28	1.33	72	
3	10	-6	1	32.89	32.74	-32.67	2.23	.66163	.14	.51	176	
3	10	-4	1	23.98	23.69	4.90	23.18	.55903	.29	1.36	78	
3	10	-2	1	45.05	45.90	39.66	23.09	.48723	-.84	-1.73	30	
3	10	0	1	24.67	24.51	3.66	-24.24	.46084	.15	.63	279	
3	10	2	1	19.88	20.31	15.97	12.55	.48731	-.43	-2.30	38	
3	10	4	1	7.84	7.88	5.77	5.37	.55918	-.05	-.19	42	
3	10	6	1	30.20	29.53	-26.92	-12.13	.66182	.67	2.40	205	
3	11	-7	1	17.56	17.23	15.98	6.44	.74843	.33	1.43	21	
3	11	-5	1	56.30	56.34	26.84	-49.54	.64020	-.03	-.06	299	
3	11	-3	1	48.38	48.26	-28.88	-38.66	.55648	.12	.31	234	
3	11	-1	1	12.50	12.07	10.63	5.71	.50951	.43	2.43	28	
3	11	1	1	34.85	34.63	27.40	-21.18	.50956	.22	.76	323	
3	11	3	1	39.22	39.09	-21.79	-32.46	.55660	.13	.35	237	
3	11	5	1	19.27	19.00	-15.11	-11.52	.64037	.27	1.42	218	
3	11	7	1	21.42	22.01	16.15	-14.95	.74863	-.58	-2.73	318	
3	12	-6	1	23.30	23.46	-22.71	-5.87	.72362	-.16	-.79	195	
3	12	-4	1	36.01	36.69	15.43	33.28	.63118	-.68	-1.97	65	
3	12	-2	1	42.96	43.01	38.69	-18.81	.56857	-.06	-.15	335	
3	12	0	1	24.41	24.33	-20.47	-13.15	.54613	.08	.35	213	
3	12	2	1	10.48	10.28	-9.34	4.30	.56864	.20	.97	155	
3	12	4	1	7.61	7.61	1.32	-7.50	.63132	.00	.01	281	
3	12	6	1	17.51	16.64	-16.64	-.19	.72380	.87	4.03	181	
3	13	-5	1	9.64	9.38	6.71	6.55	.70961	.26	.94	44	
3	13	-3	1	23.12	23.05	-21.50	8.32	.63511	.07	.31	158	
3	13	-1	1	37.76	38.19	-1.55	38.16	.59438	-.43	-1.32	92	
3	13	1	1	47.82	47.65	27.31	39.05	.59442	.17	.44	55	
3	13	3	1	8.74	8.53	-2.38	8.20	.63521	.21	.81	106	
3	13	5	1	31.91	31.49	1.42	31.46	.70976	.42	1.66	87	
3	14	-4	1	9.93	10.61	9.49	4.75	.70702	-.68	-2.45	26	
3	14	-2	1	23.71	23.79	20.81	11.53	.65174	-.08	-.33	28	
3	14	0	1	29.12	29.56	-7.74	-28.53	.63226	-.44	-1.63	255	
3	14	2	1	10.15	10.69	-9.70	4.50	.65180	-.55	-2.15	155	
3	14	4	1	24.19	24.25	-2.84	24.08	.70715	-.06	-.27	96	
3	15	-3	1	36.23	36.36	-25.26	-26.15	.71600	-.13	-.39	226	
3	15	-1	1	10.94	10.20	-8.99	-4.82	.68014	.74	2.99	209	
3	15	1	1	22.06	22.25	-6.54	-21.27	.68017	-.19	-.99	253	
3	15	3	1	21.87	22.10	-14.96	-16.27	.71609	-.23	-1.10	228	
3	16	-2	1	18.07	17.78	6.93	-16.37	.73612	.29	1.33	293	
3	16	0	1	8.46	8.48	2.31	-8.15	.71893	-.02	-.05	286	
3	16	2	1	18.94	19.22	-15.96	-10.72	.73617	-.29	-1.30	214	
4	0	-8	1	32.11	31.61	31.57	-1.39	.65669	.51	1.84	358	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
4	0	-6	1	48.15	48.88	48.55	5.71	.50587	-.73	-1.46	6	
4	0	-4	1	23.63	23.60	-23.32	3.64	.36150	.03	.12	171	
4	0	-2	1	84.80	87.62	16.62	86.04	.23574	-2.83	-9.24	79	
4	0	4	1	63.29	64.26	-57.49	-28.72	.36182	-.97	-2.47	207	
4	0	6	1	15.66	15.79	-7.13	14.09	.50621	-.14	-.82	116	
4	0	8	1	7.61	8.17	1.81	-7.97	.65704	-.56	-1.92	283	
4	1	-9	1	12.68	13.06	13.02	1.01	.73461	-.38	-1.54	4	
4	1	-7	1	15.42	15.40	-11.75	-9.95	.58246	.03	.15	221	
4	1	-5	1	29.28	28.91	-3.62	28.68	.43472	.37	1.40	97	
4	1	-3	1	95.74	98.63	91.43	36.99	.29802	-2.89	-8.32	22	
4	1	-1	1	39.55	39.26	6.17	-38.77	.19688	.29	1.04	280	
4	1	1	1	60.88	60.76	-60.60	-4.49	.19702	.11	.40	185	
4	1	3	1	61.71	61.12	35.53	49.73	.29831	.59	1.69	54	
4	1	5	1	18.34	17.46	6.42	-16.24	.43505	.88	4.71	292	
4	1	7	1	25.98	25.81	-25.03	-6.31	.58281	.17	.64	195	
4	1	9	1	14.74	14.91	5.70	13.78	.73496	-.17	-.76	67	
4	2	-8	1	42.28	42.24	-41.91	5.21	.66260	.04	.12	172	
4	2	-6	1	29.13	30.55	1.00	-30.53	.51353	-1.42	-5.53	272	
4	2	-4	1	73.71	74.83	-64.82	-37.39	.37214	-1.12	-2.80	210	
4	2	-2	1	117.74	123.13	-89.94	84.10	.25175	-5.39	-17.05	136	
4	2	0	1	99.07	99.71	88.51	45.91	.19591	-.64	-2.31	27	
4	2	2	1	131.75	133.81	-70.34	-113.83	.25198	-2.06	-6.51	239	
4	2	4	1	80.98	80.68	-56.55	-57.55	.37245	.30	.75	226	
4	2	6	1	44.52	44.56	-24.19	37.42	.51387	-.03	-.07	122	
4	2	8	1	10.72	10.82	-10.67	1.81	.66295	-.10	-.42	170	
4	3	-9	1	19.05	19.20	18.56	4.92	.74516	-.16	-.72	14	
4	3	-7	1	12.53	12.80	-9.05	-9.05	.59571	-.27	-1.35	225	
4	3	-5	1	44.61	44.81	-38.51	22.92	.45232	-.20	-.44	149	
4	3	-3	1	41.34	42.49	42.28	-4.27	.32315	-1.16	-3.11	355	
4	3	-1	1	71.69	71.29	13.05	-70.09	.23318	.40	1.32	281	
4	3	1	1	38.48	38.55	-35.61	14.76	.23331	-.07	-.23	157	
4	3	3	1	51.27	51.63	19.46	47.82	.32342	-.36	-.97	67	
4	3	5	1	31.39	29.55	14.08	-25.98	.45264	1.84	6.84	299	
4	3	7	1	15.28	15.35	-.32	-15.34	.59605	-.06	-.33	269	
4	3	9	1	12.31	12.09	7.81	9.23	.74551	.22	.87	49	
4	4	-8	1	37.47	37.15	36.99	3.39	.68005	.33	1.04	5	
4	4	-6	1	32.44	32.52	31.99	-5.85	.53585	-.09	-.28	350	
4	4	-4	1	15.96	16.26	-12.66	-10.20	.40238	-.30	-1.89	219	
4	4	-2	1	56.82	56.50	-18.69	53.32	.29462	.32	.91	109	
4	4	0	1	97.18	97.73	78.94	57.62	.24860	-.55	-1.76	36	
4	4	2	1	145.17	148.74	136.32	-59.49	.29481	-3.56	-10.37	337	
4	4	4	1	25.69	25.51	-22.60	-11.85	.40267	.18	.71	208	
4	4	6	1	22.04	21.74	10.77	18.88	.53617	.31	1.47	60	
4	4	8	1	25.79	25.25	25.25	.17	.68039	.54	2.46	0	
4	5	-7	1	8.38	7.98	-7.91	-1.06	.62137	.40	1.57	188	
4	5	-5	1	30.95	31.75	22.66	22.24	.48562	-.80	-2.79	44	
4	5	-3	1	25.01	26.13	23.35	-11.74	.36832	-1.13	-4.69	334	
4	5	-1	1	92.45	91.35	-48.61	-77.34	.29258	1.10	3.19	238	
4	5	1	1	99.42	98.14	-98.07	-3.76	.29268	1.28	3.71	183	
4	5	3	1	31.39	31.12	.12	31.12	.36855	.27	.93	89	
4	5	5	1	37.01	36.37	34.70	10.89	.48591	.65	1.88	17	
4	5	7	1	13.93	13.77	-3.43	13.33	.62170	.16	.80	104	
4	6	-8	1	25.25	25.46	-23.26	10.37	.70817	-.21	-.97	155	
4	6	-6	1	31.28	31.95	-24.42	-20.60	.57111	-.67	-2.38	221	
4	6	-4	1	88.87	90.26	-71.65	-54.89	.44827	-1.39	-3.10	218	
4	6	-2	1	78.41	78.52	-74.88	23.65	.35473	-.11	-.29	162	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
4	6	0	1	15.11	15.43	11.67	10.10	.31755	-.33	-2.12	40	
4	6	2	1	60.65	59.22	-46.98	-36.04	.35490	1.43	3.66	218	
4	6	4	1	44.33	44.06	-38.67	-21.13	.44853	.27	.57	209	
4	6	6	1	24.49	24.19	-23.98	3.17	.57141	.30	1.28	172	
4	6	8	1	10.09	9.41	3.18	8.85	.70849	.68	2.57	70	
4	7	-7	1	9.88	9.66	5.88	-7.67	.65798	.21	.85	308	
4	7	-5	1	7.99	8.37	-6.45	5.33	.53166	-.38	-1.65	140	
4	7	-3	1	24.22	24.34	10.27	-22.07	.42720	-.12	-.57	295	
4	7	-1	1	43.84	42.78	-.71	-42.77	.36393	1.07	2.70	270	
4	7	1	1	37.94	38.30	-34.15	17.34	.36401	-.37	-.91	153	
4	7	3	1	33.57	32.96	-8.98	31.72	.42740	.61	1.93	105	
4	7	5	1	33.52	33.57	33.55	-1.12	.53193	-.04	-.14	359	
4	7	7	1	21.12	20.58	17.07	-11.49	.65829	.54	2.83	327	
4	8	-8	1	42.67	43.29	43.17	-3.28	.74575	-.62	-1.59	356	
4	8	-6	1	31.64	30.98	25.03	-18.25	.61710	.66	2.48	324	
4	8	-4	1	35.67	35.80	35.47	4.86	.50556	-.14	-.38	7	
4	8	-2	1	45.73	44.85	23.06	38.47	.42484	.88	2.00	59	
4	8	0	1	20.26	19.41	2.68	19.23	.39432	.84	4.21	82	
4	8	2	1	79.36	78.93	76.97	-17.49	.42497	.43	.99	348	
4	8	4	1	14.39	14.68	3.34	14.30	.50579	-.29	-1.73	76	
4	8	6	1	16.51	16.09	.03	16.09	.61738	.42	2.21	89	
4	8	8	1	18.10	18.56	18.28	3.21	.74607	-.47	-2.08	9	
4	9	-7	1	14.51	14.34	-1.39	14.27	.70385	.17	.75	95	
4	9	-5	1	45.87	45.87	38.24	25.35	.58747	.00	.00	33	
4	9	-3	1	29.42	29.65	15.54	-25.26	.49493	-.23	-.81	302	
4	9	-1	1	35.23	34.47	-2.44	-34.38	.44148	.76	2.34	266	
4	9	1	1	46.81	46.90	-32.27	34.03	.44154	-.09	-.19	133	
4	9	3	1	42.52	43.49	-25.53	35.20	.49511	-.97	-2.79	125	
4	9	5	1	23.29	23.29	4.96	22.76	.58772	-.00	-.02	77	
4	9	7	1	6.87	6.06	-2.03	5.71	.70413	.81	2.40	109	
4	10	-6	1	31.20	31.35	-30.20	-8.39	.67163	-.15	-.52	196	
4	10	-4	1	39.59	39.42	-38.38	-8.99	.57084	.17	.44	194	
4	10	-2	1	24.64	25.05	-20.07	14.99	.50075	-.40	-1.74	143	
4	10	0	1	14.58	14.37	2.49	14.15	.47513	.21	1.29	80	
4	10	2	1	23.99	24.00	-21.76	10.12	.50086	-.01	-.05	155	
4	10	4	1	27.14	26.62	-12.08	-23.72	.57104	.52	2.07	244	
4	10	6	1	43.45	43.30	-38.59	-19.64	.67188	.15	.42	207	
4	11	-7	1	15.69	15.25	2.54	15.04	.75728	.44	1.85	80	
4	11	-5	1	23.99	23.89	22.71	-7.42	.65053	.10	.47	342	
4	11	-3	1	19.92	19.34	18.50	-5.64	.56836	.58	3.23	344	
4	11	-1	1	4.28	5.06	-4.06	3.01	.52247	-.78	-2.06	143	
4	11	1	1	22.61	22.95	-10.22	-20.55	.52252	-.34	-1.52	244	
4	11	3	1	6.72	6.29	-4.31	4.59	.56851	.43	1.53	133	
4	11	5	1	28.76	29.16	26.20	12.80	.65076	-.40	-1.54	26	
4	12	-6	1	11.84	11.97	10.25	-6.17	.73278	-.12	-.46	329	
4	12	-4	1	32.92	32.28	20.22	25.17	.64167	.64	2.09	51	
4	12	-2	1	41.89	41.36	41.32	1.05	.58020	.54	1.36	2	
4	12	0	1	17.36	17.72	16.41	-6.70	.55824	-.37	-2.12	338	
4	12	2	1	37.83	37.35	36.96	5.37	.58030	.48	1.51	8	
4	12	4	1	20.56	20.37	20.29	-1.81	.64185	.18	.97	355	
4	12	6	1	8.31	7.68	1.94	-7.43	.73301	.63	2.00	285	
4	13	-5	1	25.18	25.22	17.61	18.06	.71894	-.04	-.19	45	
4	13	-3	1	20.88	20.71	-5.96	-19.84	.64553	.17	.90	254	
4	13	-1	1	9.94	9.51	-4.13	-8.57	.60552	.44	1.85	245	
4	13	1	1	8.89	6.77	2.50	6.29	.60557	2.11	8.44	68	
4	13	3	1	17.34	17.75	-16.04	7.61	.64567	-.41	-2.07	154	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
4	13	5	1	14.19	14.32	-4.90	13.46	.71914	-.14	-.58	110	
4	14	-4	1	33.81	34.08	-27.13	20.63	.71640	-.28	-.92	142	
4	14	-2	1	17.50	17.54	-17.26	-3.10	.66191	-.03	-.17	191	
4	14	0	1	26.92	27.02	-26.89	-2.64	.64275	-.09	-.40	186	
4	14	2	1	17.72	17.26	-16.49	5.10	.66199	.46	2.28	162	
4	14	4	1	40.82	41.33	15.92	-38.13	.71656	-.50	-1.32	293	
4	15	-3	1	19.94	19.54	6.85	-18.30	.72527	.40	1.85	291	
4	15	-1	1	17.60	17.82	-17.21	4.63	.68990	-.22	-1.04	164	
4	15	1	1	29.40	29.84	-.77	-29.83	.68994	-.44	-1.76	269	
4	15	3	1	5.71	5.72	-4.27	-3.80	.72539	-.00	-.01	222	
4	16	-2	1	35.64	35.78	31.73	-16.54	.74514	-.14	-.44	333	
4	16	0	1	21.16	21.28	17.54	-12.04	.72817	-.12	-.57	326	
4	16	2	1	23.24	23.22	9.05	21.38	.74521	.02	.09	67	
5	1	-9	1	11.73	10.94	-10.63	-2.58	.74618	.79	3.02	194	
5	1	-7	1	6.46	7.12	1.42	6.97	.59700	-.66	-2.25	78	
5	1	-5	1	34.67	34.78	13.30	32.14	.45403	-.11	-.34	67	
5	1	-3	1	33.05	32.41	-9.83	30.89	.32556	.64	2.42	107	
5	1	-1	1	115.48	118.16	-4.69	118.07	.23654	-2.68	-8.80	92	
5	1	1	1	17.05	18.15	7.27	16.63	.23669	-1.10	-6.72	66	
5	1	3	1	51.17	50.26	45.32	21.73	.32589	.91	2.48	25	
5	1	5	1	38.69	39.09	36.92	12.84	.45443	-.40	-1.22	19	
5	1	7	1	32.82	31.51	-3.35	31.33	.59742	1.32	4.59	96	
5	1	9	1	33.60	33.71	-11.54	31.67	.74661	-.11	-.35	110	
5	2	-8	1	29.46	29.46	-17.61	23.61	.67541	.00	.01	126	
5	2	-6	1	12.03	11.92	-4.19	11.16	.52997	.10	.56	110	
5	2	-4	1	25.59	25.52	3.50	-25.28	.39453	.07	.29	278	
5	2	-2	1	13.01	12.74	-12.33	3.22	.28383	.27	1.95	165	
5	2	0	1	31.25	30.14	25.95	-15.33	.23575	1.11	3.54	330	
5	2	2	1	54.18	52.25	36.02	-37.85	.28409	1.93	5.67	314	
5	2	4	1	11.16	11.00	-10.73	2.41	.39490	.16	1.10	167	
5	2	6	1	3.81	3.12	3.12	-.17	.53038	.68	1.80	357	
5	2	8	1	15.79	15.80	10.45	-11.85	.67584	-.01	-.07	312	
5	3	-9	1	12.10	12.00	4.01	11.31	.75657	.10	.36	70	
5	3	-7	1	22.08	22.10	-4.06	-21.72	.60993	-.02	-.10	260	
5	3	-5	1	32.66	33.50	-33.00	-5.76	.47091	-.83	-2.99	190	
5	3	-3	1	20.25	20.71	-4.48	-20.21	.34872	-.45	-2.19	258	
5	3	-1	1	149.23	153.42	15.75	-152.61	.26752	-4.19	-12.83	276	
5	3	1	1	18.87	18.43	-18.40	1.00	.26765	.43	2.47	176	
5	3	3	1	41.31	40.46	3.42	-40.32	.34903	.85	2.19	275	
5	3	5	1	64.69	64.24	15.54	-62.33	.47129	.45	.96	285	
5	3	7	1	39.92	39.14	-16.23	-35.62	.61035	.78	2.36	246	
5	3	9	1	17.41	16.75	1.53	-16.68	.75700	.66	2.89	276	
5	4	-8	1	7.02	7.04	-6.94	-1.17	.69253	-.03	-.08	190	
5	4	-6	1	13.99	14.08	-3.74	13.58	.55162	-.09	-.50	105	
5	4	-4	1	11.24	10.73	-7.55	-7.62	.42318	.52	3.29	226	
5	4	-2	1	47.70	47.88	-25.72	40.39	.32246	-.19	-.50	122	
5	4	0	1	19.63	19.80	.91	19.78	.28107	-.16	-.92	87	
5	4	2	1	54.86	53.36	35.06	-40.22	.32269	1.51	4.11	312	
5	4	4	1	11.21	11.13	-4.58	-10.15	.42352	.08	.50	246	
5	4	6	1	13.26	12.97	11.39	-6.20	.55201	.29	1.56	332	
5	4	8	1	10.29	10.36	7.53	-7.12	.69295	-.08	-.30	317	
5	5	-7	1	7.59	6.68	-1.80	-6.44	.63502	.90	3.21	255	
5	5	-5	1	37.60	37.82	-1.54	37.79	.50298	-.23	-.64	92	
5	5	-3	1	31.96	30.50	21.40	21.74	.39094	1.46	4.90	45	
5	5	-1	1	51.77	50.19	5.70	49.87	.32061	1.58	4.32	83	
5	5	1	1	67.99	67.05	-23.27	62.89	.32073	.94	2.57	110	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
5	5	3	1	78.68	78.94	47.24	63.24	.39122	-.26	-.63	53	
5	5	5	1	29.91	30.38	30.37	.34	.50333	-.47	-1.58	0	
5	5	7	1	34.93	34.44	-29.32	18.06	.63542	.50	1.66	148	
5	6	-8	1	31.09	30.69	-21.59	21.81	.72017	.40	1.57	134	
5	6	-6	1	27.04	28.03	26.66	8.67	.58594	-.99	-3.84	18	
5	6	-4	1	48.68	48.71	30.24	-38.19	.46703	-.03	-.07	309	
5	6	-2	1	25.42	24.52	-21.09	12.51	.37818	.90	3.69	149	
5	6	0	1	36.66	35.84	29.11	20.90	.34356	.83	2.14	35	
5	6	2	1	34.15	33.57	16.62	-29.17	.37837	.57	1.95	300	
5	6	4	1	[illegible]	47.09	-42.48	20.31	.46734	.81	1.74	154	
5	6	6	1	[illegible]	30.36	5.03	29.95	.58631	-.36	-1.24	80	
5	6	8	1	26.42	26.67	14.42	-22.43	.72057	-.24	-1.05	303	
5	7	-7	1	43.58	43.61	19.74	-38.89	.67089	-.03	-.09	297	
5	7	-5	1	21.25	21.12	-14.11	-15.71	.54756	.14	.67	229	
5	7	-3	1	8.77	7.73	5.71	-5.21	.44685	1.04	5.55	318	
5	7	-1	1	83.93	82.34	-12.77	-81.34	.38683	1.60	3.92	262	
5	7	1	1	55.32	54.87	-49.19	24.31	.38692	.45	1.10	153	
5	7	3	1	9.47	8.31	7.87	2.69	.44709	1.15	6.53	18	
5	7	5	1	64.42	63.26	24.29	-58.41	.54789	1.16	2.22	293	
5	7	7	1	41.43	39.88	-22.35	-33.02	.67126	1.55	4.38	236	
5	8	-8	1	6.19	6.29	-6.11	-1.49	.75716	-.10	-.25	194	
5	8	-6	1	15.96	15.85	10.29	12.06	.63085	.11	.58	49	
5	8	-4	1	24.78	24.41	-14.83	-19.39	.52227	.38	1.71	233	
5	8	-2	1	32.41	31.77	-23.65	21.21	.44460	.63	1.93	138	
5	8	0	1	36.19	35.53	15.32	32.06	.41555	.66	2.13	64	
5	8	2	1	13.61	13.20	-8.41	-10.17	.44476	.42	2.67	231	
5	8	4	1	35.77	34.74	-30.37	16.86	.52255	1.03	2.83	150	
5	8	6	1	11.75	10.78	5.13	9.47	.63119	.97	4.40	61	
5	9	-7	1	8.89	7.78	-5.80	-5.19	.71592	1.11	3.78	222	
5	9	-5	1	22.43	22.01	-7.29	20.77	.60190	.42	1.94	109	
5	9	-3	1	43.36	43.63	41.05	14.80	.51199	-.27	-.77	19	
5	9	-1	1	20.22	20.59	-18.26	9.51	.46054	-.37	-1.93	152	
5	9	1	1	59.60	60.11	-47.84	36.39	.46061	-.51	-1.10	142	
5	9	3	1	87.81	88.66	34.76	81.57	.51220	-.86	-1.74	66	
5	9	5	1	19.93	19.63	13.84	13.93	.60220	.30	1.53	45	
5	9	7	1	27.10	27.52	-24.90	11.71	.71628	-.42	-1.62	154	
5	10	-6	1	27.44	28.08	27.40	6.15	.68428	-.63	-2.54	12	
5	10	-4	1	21.99	21.61	18.19	-11.67	.58569	.38	1.88	328	
5	10	-2	1	24.07	24.05	-21.43	-10.91	.51762	.03	.12	207	
5	10	0	1	24.02	23.12	21.45	8.63	.49290	.90	3.93	21	
5	10	2	1	34.76	34.38	-1.98	-34.32	.51776	.39	1.30	267	
5	10	4	1	29.55	29.99	-29.11	-7.22	.58593	-.44	-1.52	194	
5	10	6	1	56.33	56.21	27.62	48.96	.68459	.12	.28	60	
5	11	-5	1	31.56	30.70	-24.15	-18.96	.66359	.86	3.04	219	
5	11	-3	1	17.17	17.71	1.54	-17.64	.58327	-.54	-2.97	275	
5	11	-1	1	60.00	60.76	-18.30	-57.94	.53867	-.75	-1.46	253	
5	11	1	1	22.75	22.46	-22.00	-4.51	.53874	.29	1.41	192	
5	11	3	1	23.53	23.38	23.18	-3.06	.58346	.15	.73	353	
5	11	5	1	53.69	52.81	18.83	-49.33	.66387	.88	2.06	291	
5	12	-6	1	22.39	21.77	-4.41	21.32	.74439	.61	2.74	101	
5	12	-4	1	22.97	23.04	-20.94	-9.61	.65491	-.07	-.36	205	
5	12	-2	1	9.93	9.74	-7.64	6.05	.59482	.18	.80	141	
5	12	0	1	25.16	25.19	24.63	-5.29	.57343	-.03	-.11	348	
5	12	2	1	30.31	30.25	-12.96	-27.33	.59494	.06	.21	245	
5	12	4	1	22.76	22.76	-20.08	10.72	.65513	.00	.01	151	
5	12	6	1	7.88	7.89	2.35	7.54	.74468	-.01	-.03	72	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
5	13	-5	1	22.15	22.15	-1.58	22.10	.73078	-.01	-.03	94	
5	13	-3	1	34.43	34.56	25.80	23.00	.65870	-.13	-.42	41	
5	13	-1	1	10.01	8.81	-7.14	5.16	.61956	1.20	5.19	144	
5	13	1	1	29.69	30.24	-29.89	4.62	.61961	-.55	-2.05	171	
5	13	3	1	49.65	48.88	20.69	44.28	.65887	.78	1.81	64	
5	13	5	1	20.97	20.50	19.49	6.35	.73103	.48	2.24	18	
5	14	-4	1	18.82	18.29	11.21	14.45	.72829	.54	2.45	52	
5	14	-2	1	10.95	10.26	9.62	-3.58	.67476	.69	2.78	340	
5	14	0	1	25.85	26.27	26.26	-.47	.65599	-.42	-1.85	359	
5	14	2	1	22.96	21.88	5.52	-21.17	.67487	1.08	5.64	285	
5	14	4	1	24.96	24.69	-17.14	-17.78	.72848	.27	1.13	227	
5	15	-3	1	20.21	19.94	8.44	-18.07	.73701	.27	1.25	296	
5	15	-1	1	26.46	26.59	-2.94	-26.42	.70225	-.13	-.53	264	
5	15	1	1	7.67	7.34	6.26	3.83	.70230	.33	1.04	31	
5	15	3	1	19.38	20.45	15.45	-13.40	.73716	-1.07	-4.84	320	
5	16	-2	1	20.66	20.34	11.88	16.52	.75658	.31	1.41	54	
5	16	0	1	10.57	10.30	6.63	-7.88	.73988	.28	.99	311	
5	16	2	1	20.59	20.76	-10.55	-17.88	.75667	-.17	-.78	240	
6	0	-8	1	64.65	64.70	59.17	-26.17	.68508	-.04	-.07	337	
6	0	-6	1	40.25	40.84	-10.79	-39.39	.54225	-.59	-1.57	255	
6	0	-4	1	77.49	78.75	59.11	52.04	.41090	-1.26	-2.97	41	
6	0	-2	1	41.27	41.48	30.50	28.11	.30620	-.20	-.57	42	
6	0	0	1	72.37	68.88	-1.36	-68.87	.26228	3.49	10.73	269	
6	0	2	1	72.21	73.16	72.92	5.92	.30649	-.94	-2.66	4	
6	0	4	1	84.72	83.96	83.89	-3.26	.41132	.77	1.81	358	
6	0	6	1	19.54	19.70	1.44	-19.64	.54273	-.15	-.76	275	
6	0	8	1	42.66	42.55	2.67	42.47	.68559	.11	.30	86	
6	1	-7	1	29.02	28.35	-12.22	25.58	.61431	.67	2.76	115	
6	1	-5	1	28.65	28.13	25.33	12.23	.47658	.52	2.14	25	
6	1	-3	1	59.20	59.30	-21.10	-55.42	.35635	-.10	-.25	250	
6	1	-1	1	16.70	16.74	-6.45	-15.45	.27742	-.04	-.23	248	
6	1	1	1	14.45	13.38	11.58	6.69	.27758	1.08	7.59	30	
6	1	3	1	37.40	37.85	-35.73	-12.47	.35672	-.44	-1.12	200	
6	1	5	1	43.98	43.52	8.46	42.69	.47703	.46	.97	78	
6	1	7	1	43.31	43.27	42.83	6.19	.61480	.04	.11	8	
6	2	-8	1	7.49	7.43	-2.52	-6.99	.69076	.06	.19	251	
6	2	-6	1	70.52	71.44	-60.61	-37.82	.54940	-.92	-1.77	212	
6	2	-4	1	112.93	116.92	-116.19	-13.09	.42029	-4.00	-9.29	187	
6	2	-2	1	18.74	19.18	-1.31	19.14	.31869	-.44	-2.50	93	
6	2	0	1	50.12	50.15	-45.71	20.64	.27676	-.04	-.11	155	
6	2	2	1	35.96	34.42	-20.97	27.30	.31897	1.53	4.16	127	
6	2	4	1	24.72	24.00	-10.50	-21.58	.42071	.72	3.23	245	
6	2	6	1	63.50	62.83	-46.07	-42.72	.54987	.67	1.28	223	
6	2	8	1	33.37	34.24	-31.66	13.04	.69126	-.87	-3.03	157	
6	3	-7	1	35.71	35.15	-10.87	33.43	.62689	.56	1.88	108	
6	3	-5	1	53.44	54.27	54.03	5.04	.49269	-.82	-1.69	5	
6	3	-3	1	12.42	12.54	6.49	-10.73	.37763	-.12	-.87	302	
6	3	-1	1	22.49	21.81	-14.38	16.40	.30426	.68	3.18	131	
6	3	1	1	40.71	39.17	-7.51	-38.45	.30441	1.53	4.29	259	
6	3	3	1	52.30	52.22	-50.70	-12.49	.37797	.08	.20	194	
6	3	5	1	46.52	46.93	6.66	46.46	.49313	-.41	-.84	81	
6	3	7	1	28.60	28.55	28.33	3.56	.62737	.05	.19	7	
6	4	-8	1	57.03	56.90	53.79	-18.55	.70751	.12	.28	341	
6	4	-6	1	21.30	21.30	12.74	-17.07	.57032	-.01	-.03	307	
6	4	-4	1	69.49	70.49	46.78	52.73	.44729	-1.00	-2.22	48	
6	4	-2	1	54.83	54.74	43.38	33.39	.35354	.09	.23	37	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
6	4	0	1	58.25	58.09	57.21	-10.06	.31626	.17	.46	351	
6	4	2	1	53.76	53.83	47.41	25.49	.35378	-.07	-.17	28	
6	4	4	1	54.68	52.65	51.31	-11.82	.44768	2.03	4.48	348	
6	4	6	1	29.90	28.69	-6.90	-27.85	.57077	1.21	4.32	257	
6	4	8	1	26.25	25.64	-13.44	21.84	.70800	.61	2.55	121	
6	5	-7	1	22.69	22.76	-5.20	22.16	.65132	-.08	-.41	103	
6	5	-5	1	32.47	32.88	15.37	29.07	.52342	-.41	-1.36	62	
6	5	-3	1	32.98	33.29	27.79	-18.32	.41693	-.31	-.99	327	
6	5	-1	1	6.98	6.58	6.17	-2.30	.35186	.40	2.30	340	
6	5	1	1	28.33	27.52	4.52	27.14	.35198	.82	2.90	80	
6	5	3	1	17.72	17.14	-6.97	15.66	.41724	.58	3.45	113	
6	5	5	1	20.39	20.22	-14.47	14.12	.52383	.16	.84	135	
6	5	7	1	28.16	27.58	22.26	-16.29	.65178	.58	2.25	324	
6	6	-8	1	21.65	21.34	-18.38	-10.83	.73458	.31	1.48	211	
6	6	-6	1	34.22	34.21	-29.02	-18.12	.60357	.01	.04	212	
6	6	-4	1	58.60	58.80	-57.52	12.19	.48898	-.20	-.41	168	
6	6	-2	1	17.15	16.97	-3.84	16.53	.40500	.18	1.06	103	
6	6	0	1	49.59	49.71	-40.23	29.21	.37290	-.13	-.31	144	
6	6	2	1	23.08	23.14	-22.74	-4.29	.40521	-.06	-.26	191	
6	6	4	1	42.24	42.18	-12.99	-40.13	.48934	.06	.17	253	
6	6	6	1	42.51	42.69	-41.56	-9.76	.60400	-.18	-.44	194	
6	6	8	1	34.92	34.60	-34.44	3.24	.73505	.32	1.07	174	
6	7	-7	1	42.14	41.27	-19.93	36.14	.68634	.87	2.40	118	
6	7	-5	1	30.72	30.92	30.79	2.81	.56640	-.20	-.71	5	
6	7	-3	1	29.25	29.31	28.83	-5.32	.46976	-.06	-.23	350	
6	7	-1	1	16.20	15.63	-10.47	-11.60	.41310	.58	3.59	228	
6	7	1	1	45.19	45.34	-12.35	-43.62	.41320	-.15	-.35	255	
6	7	3	1	35.35	36.03	-33.80	12.49	.47004	-.68	-2.01	159	
6	7	5	1	24.47	24.01	1.11	23.98	.56678	.46	1.97	87	
6	7	7	1	20.42	20.00	18.99	-6.27	.68678	.42	2.10	342	
6	8	-6	1	26.35	26.44	26.36	-2.00	.64726	-.09	-.37	356	
6	8	-4	1	6.83	6.50	3.93	5.18	.54199	.32	1.22	52	
6	8	-2	1	7.21	6.17	4.35	4.37	.46763	1.04	4.90	45	
6	8	0	1	77.99	78.95	78.20	10.89	.44012	-.96	-2.17	7	
6	8	2	1	37.00	37.02	36.21	7.66	.46781	-.02	-.06	11	
6	8	4	1	35.57	34.61	32.01	-13.15	.54231	.97	3.14	338	
6	8	6	1	23.33	22.94	16.79	-15.64	.64766	.39	1.91	318	
6	9	-7	1 L	2.88	1.08	-.11	1.07	.73042	1.80	2.34	95	
6	9	-5	1	9.41	9.38	1.96	9.17	.61909	.03	.12	77	
6	9	-3	1	27.22	26.88	26.56	-4.14	.53210	.34	1.26	352	
6	9	-1	1	34.00	34.02	-12.52	-31.63	.48281	-.02	-.05	249	
6	9	1	1	35.08	35.23	-33.64	-10.47	.48290	-.15	-.43	198	
6	9	3	1	32.98	32.85	23.29	23.16	.53234	.14	.44	44	
6	9	5	1	20.22	19.94	17.06	10.33	.61944	.28	1.48	31	
6	9	7	1	17.05	16.36	14.59	-7.40	.73084	.69	3.13	334	
6	10	-6	1	21.90	21.84	-18.27	-11.98	.69944	.06	.29	214	
6	10	-4	1	41.13	40.15	-35.12	-19.47	.60334	.98	2.43	209	
6	10	-2	1	31.73	31.15	-29.57	-9.81	.53753	.58	1.87	199	
6	10	0	1	38.80	38.17	-36.43	11.41	.51378	.63	1.75	162	
6	10	2	1	19.77	19.53	-7.44	-18.06	.53769	.24	1.27	248	
6	10	4	1	29.93	30.29	-20.36	-22.43	.60363	-.37	-1.39	228	
6	10	6	1	28.25	28.32	-20.75	19.27	.69981	-.07	-.27	137	
6	11	-5	1	7.35	6.99	-4.64	5.22	.67922	.36	1.15	131	
6	11	-3	1	26.38	25.83	13.79	-21.84	.60100	.54	2.25	303	
6	11	-1	1	41.51	40.69	-5.46	-40.32	.55783	.82	2.18	263	
6	11	1	1	21.87	22.22	-22.21	-.86	.55791	-.35	-1.72	183	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
6	11	3	1	37.69	37.83	-24.38	28.93	.60122	-.14	-.41	130	
6	11	5	1	10.13	10.31	9.08	4.89	.67954	-.19	-.71	28	
6	12	-4	1	24.08	23.56	10.29	-21.19	.67074	.52	2.39	296	
6	12	-2	1	35.78	35.44	-26.46	23.58	.61222	.34	1.00	138	
6	12	0	1	52.15	51.85	41.74	30.76	.59148	.30	.55	36	
6	12	2	1	37.97	37.90	35.88	-12.20	.61236	.08	.23	342	
6	12	4	1	7.53	6.55	6.52	.71	.67100	.97	3.24	6	
6	13	-5	1	8.11	8.10	4.68	6.61	.74500	.01	.04	54	
6	13	-3	1	27.95	27.40	22.36	15.85	.67445	.55	2.27	35	
6	13	-1	1	21.39	21.76	2.67	-21.60	.63629	-.37	-1.82	278	
6	13	1	1	46.65	46.94	-46.94	-.71	.63636	-.29	-.69	181	
6	13	3	1	27.95	28.37	9.79	26.63	.67465	-.43	-1.73	69	
6	13	5	1	19.74	19.23	17.32	8.34	.74529	-.49	-2.17	25	
6	14	-4	1	33.94	34.01	-21.48	-26.37	.74256	-.08	-.27	231	
6	14	-2	1	24.18	24.21	-22.77	8.21	.69015	-.03	-.15	160	
6	14	0	1	21.55	21.61	-7.70	20.19	.67182	-.07	-.34	110	
6	14	2	1	7.35	7.09	.12	-7.08	.69028	.27	.83	271	
6	14	4	1	41.80	42.95	-42.35	-7.11	.74279	-1.15	-2.96	190	
6	15	-3	1	10.93	11.31	10.54	4.09	.75112	-.38	-1.34	21	
6	15	-1	1	23.83	24.11	7.37	-22.95	.71705	-.27	-1.28	288	
6	15	1	1	23.88	24.05	-18.32	15.57	.71711	-.17	-.78	139	
6	15	3	1	20.77	20.60	-11.18	17.31	.75130	.17	.78	122	
6	16	0	1	40.58	40.71	27.21	30.28	.75395	-.13	-.38	48	
7	1	-7	1	42.65	41.59	-21.19	35.78	.63416	1.07	2.59	120	
7	1	-5	1	16.89	17.31	15.77	7.15	.50193	-.42	-2.61	24	
7	1	-3	1	48.90	48.98	33.18	36.03	.38962	-.08	-.19	47	
7	1	-1	1	55.07	54.69	-35.48	41.62	.31906	.38	1.04	130	
7	1	1	1	62.22	62.43	-13.56	60.94	.31921	.21	-.59	102	
7	1	3	1	38.10	37.68	-4.15	37.45	.39001	.42	1.02	96	
7	1	5	1	49.57	51.03	-45.21	23.67	.50243	-1.44	-2.92	152	
7	1	7	1	39.08	39.04	4.50	38.78	.63472	.04	.11	83	
7	2	-8	1	28.53	28.74	18.07	-22.35	.70847	-.21	-.84	309	
7	2	-6	1	12.46	12.70	6.58	-10.86	.57152	-.24	-1.19	302	
7	2	-4	1	17.65	17.70	-6.47	16.47	.44884	-.04	-.27	111	
7	2	-2	1	10.78	10.35	-8.87	-5.34	.35552	.43	3.08	212	
7	2	0	1	45.13	44.51	-31.75	31.18	.31849	.62	1.71	135	
7	2	2	1	33.94	33.60	-24.02	23.50	.35580	.33	1.20	135	
7	2	4	1	16.42	16.68	11.41	-12.17	.44929	-.26	-1.62	314	
7	2	6	1 L	2.40	1.04	-.91	.50	.57205	1.36	2.11	151	
7	2	8	1	9.70	9.60	-8.30	4.81	.70904	.10	.37	149	
7	3	-7	1	32.17	32.37	27.84	-16.52	.64636	-.20	-.64	330	
7	3	-5	1	37.77	38.28	14.39	-35.47	.51725	-.51	-1.40	293	
7	3	-3	1	75.87	76.70	-44.72	-62.31	.40917	-.82	-1.94	235	
7	3	-1	1	36.13	36.07	-34.65	10.02	.34265	.06	.16	163	
7	3	1	1	36.68	35.35	24.07	-25.89	.34280	1.33	3.43	313	
7	3	3	1	24.87	24.56	-4.77	-24.10	.40954	.31	1.17	259	
7	3	5	1	8.00	7.98	5.44	-5.84	.51774	.01	.06	313	
7	3	7	1	46.27	45.10	12.50	-43.33	.64691	1.16	2.76	287	
7	4	-8	1	21.76	21.16	18.80	9.72	.72481	.60	2.91	27	
7	4	-6	1	20.36	20.00	.53	-19.99	.59166	.37	2.01	272	
7	4	-4	1	25.93	26.92	-25.30	9.20	.47422	-.98	-3.98	160	
7	4	-2	1	25.64	26.08	25.92	2.91	.38706	-.44	-1.79	6	
7	4	0	1	28.79	28.40	8.14	-27.20	.35336	.39	1.38	287	
7	4	2	1	46.70	47.52	-34.54	32.63	.38732	-.82	-1.98	136	
7	4	4	1	20.19	20.74	9.07	18.66	.47464	-.55	-2.84	64	
7	4	6	1	13.51	13.92	-9.74	-9.94	.59217	-.40	-2.06	226	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
7	4	8	1	14.02	14.17	-12.59	6.52	.72537	-.16	-.68	152	
7	5	-7	1	42.89	42.43	-4.68	42.17	.67008	.46	1.29	96	
7	5	-5	1	35.18	35.45	31.37	-16.52	.54660	-.28	-.91	333	
7	5	-3	1	21.26	21.26	-8.26	19.59	.44570	.00	.00	112	
7	5	-1	1	86.31	86.55	-52.77	68.60	.38554	-.24	-.59	127	
7	5	1	1	46.64	46.39	9.36	45.44	.38567	.25	.60	78	
7	5	3	1	17.16	17.21	7.88	15.30	.44604	-.05	-.31	62	
7	5	5	1	33.63	33.58	-23.79	23.70	.54706	.05	.15	135	
7	5	7	1	45.42	45.60	21.43	40.25	.67061	-.17	-.42	61	
7	6	-8	1	34.52	34.47	17.51	-29.69	.75126	.05	.15	301	
7	6	-6	1	29.49	28.95	19.55	-21.35	.62377	.54	2.00	228	
7	6	-4	1	31.99	32.39	-22.08	23.70	.51373	-.40	-1.34	132	
7	6	-2	1	22.14	21.36	9.41	-19.18	.43457	.78	3.65	297	
7	6	0	1	19.52	19.65	-17.85	8.23	.40484	-.14	-.74	155	
7	6	2	1	15.52	15.20	-2.85	14.93	.43480	.32	2.17	100	
7	6	4	1	44.05	44.70	36.94	-25.17	.51412	-.65	-1.82	326	
7	6	6	1	13.55	12.90	-3.20	-12.50	.62426	.65	3.19	256	
7	6	8	1	21.56	21.95	-14.35	16.61	.75179	-.47	-1.87	130	
7	7	-7	1	6.23	5.93	-4.51	3.84	.70417	.30	.80	139	
7	7	-5	1	28.79	29.45	16.38	-24.48	.58789	-.66	-2.56	304	
7	7	-3	1	90.71	90.83	-30.80	-85.45	.49547	-.11	-.24	251	
7	7	-1	1	25.21	24.72	-23.16	-8.66	.44213	.49	2.05	201	
7	7	1	1	68.20	68.07	64.24	-22.51	.44225	.13	.29	341	
7	7	3	1	55.95	55.45	14.69	-53.47	.49578	.50	1.02	286	
7	7	5	1	13.20	12.86	-12.75	-1.69	.58832	.34	1.75	188	
7	7	7	1	34.32	34.06	15.30	-30.43	.70467	.26	.80	297	
7	8	-6	1	23.06	23.39	-17.20	-15.85	.66614	-.33	-1.48	223	
7	8	-4	1	30.52	30.45	-15.48	26.22	.56442	.07	.27	120	
7	8	-2	1	45.14	45.08	40.82	19.13	.49346	.06	.11	25	
7	8	0	1	54.47	55.11	15.27	-52.95	.46749	-.64	-1.37	287	
7	8	2	1	4.02	3.50	-2.21	2.71	.49366	.53	1.50	129	
7	8	4	1	18.24	17.96	17.53	3.89	.56478	.29	1.65	12	
7	8	6	1	15.83	16.02	-5.17	-15.16	.66660	-.20	-.97	252	
7	9	-7	1	39.86	39.38	8.72	38.41	.74720	.48	1.41	77	
7	9	-5	1	30.58	30.45	29.97	-5.39	.63880	.13	.49	350	
7	9	-3	1	31.18	31.83	-27.36	16.26	.55493	-.65	-2.38	149	
7	9	-1	1	65.33	63.66	-10.26	62.83	.50788	1.67	3.39	99	
7	9	1	1	47.52	46.30	20.10	41.71	.50798	1.22	2.47	64	
7	9	3	1	5.25	4.95	1.93	-4.56	.55521	.30	.93	293	
7	9	5	1	13.21	12.82	-.35	12.82	.63920	.38	1.82	91	
7	9	7	1	36.15	35.43	13.84	32.61	.74767	.73	2.14	67	
7	10	-6	1	32.66	32.83	-27.79	-17.49	.71694	-.17	-.57	213	
7	10	-4	1	26.41	26.41	-10.83	24.09	.62356	-.01	-.03	114	
7	10	-2	1	32.08	31.76	30.47	8.96	.56015	.31	1.14	16	
7	10	0	1	11.87	11.68	-2.22	-11.47	.53741	.19	1.01	260	
7	10	2	1	7.59	7.00	-5.36	4.51	.56033	.59	2.32	139	
7	10	4	1	10.81	11.12	10.91	-2.16	.62389	-.31	-1.37	349	
7	10	6	1	37.20	37.24	-25.57	-27.08	.71737	-.04	-.11	227	
7	11	-5	1	28.80	28.20	28.18	-1.18	.69724	.60	2.38	358	
7	11	-3	1	58.36	57.78	-12.25	-56.47	.62131	.57	1.00	258	
7	11	-1	1	21.46	20.74	-19.58	-6.82	.57966	.72	3.64	200	
7	11	1	1	29.79	29.26	28.16	-7.96	.57975	.52	2.04	345	
7	11	3	1	50.18	50.45	-4.58	-50.25	.62155	-.27	-.67	265	
7	11	5	1	18.99	18.57	-18.11	-4.10	.69760	.42	2.04	193	
7	12	-4	1	29.09	28.60	.26	28.60	.68899	.49	2.00	89	
7	12	-2	1	33.95	33.93	24.09	23.89	.63217	.02	.06	44	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
7	12	0	1	24.86	25.15	-1.05	-25.13	.61212	-.30	-1.20	268	
7	12	2	1	6.61	6.48	-4.93	4.21	.63233	.13	.42	139	
7	12	4	1	7.93	7.11	-7.10	-.46	.68929	.82	2.69	184	
7	13	-3	1	20.89	20.54	-19.27	7.10	.69261	.36	1.76	159	
7	13	-1	1	42.33	42.28	-7.18	41.66	.65551	.05	.14	99	
7	13	1	1	44.29	44.46	2.76	44.37	.65559	-.17	-.40	86	
7	13	3	1	17.20	16.85	-6.16	15.69	.69283	.34	1.63	111	
7	14	-2	1	18.70	18.67	17.20	7.26	.70791	.02	.12	22	
7	14	0	1	16.66	15.98	-1.16	-15.94	.69006	.68	3.26	266	
7	14	2	1	20.88	20.55	-17.74	-10.37	.70805	.33	1.63	211	
7	15	-1	1	29.52	29.45	-19.30	-22.24	.73416	.07	.25	230	
7	15	1	1	16.28	16.79	-.17	-16.79	.73423	-.51	-2.20	270	
8	0	-8	1	15.65	14.94	14.73	2.50	.72300	.70	3.18	9	
8	0	-6	1	63.47	64.53	64.53	-.22	.58945	-1.06	-1.91	0	
8	0	-4	1	34.37	34.34	-27.77	-20.20	.47147	.03	.10	217	
8	0	-2	1	46.37	46.15	-24.39	39.18	.38371	.22	.54	121	
8	0	0	1	118.26	121.95	94.29	77.33	.34971	-3.68	-9.64	39	
8	0	2	1	57.97	58.74	56.82	-14.89	.38401	-.77	-1.88	346	
8	0	4	1	72.57	75.53	32.51	-68.17	.47196	-2.95	-6.33	296	
8	0	6	1	9.74	9.65	-8.81	-3.94	.59004	.09	.39	205	
8	0	8	1	21.29	21.30	11.17	-18.14	.72364	-.01	-.06	302	
8	1	-7	1	10.16	10.46	-.60	-10.44	.65633	-.30	-1.20	267	
8	1	-5	1	26.32	25.95	-20.22	16.27	.52967	.37	1.38	141	
8	1	-3	1	75.17	77.51	47.39	61.34	.42479	-2.34	-5.38	52	
8	1	-1	1	40.40	41.10	26.31	-31.58	.36118	-.71	-1.79	310	
8	1	1	1	65.48	67.00	-48.60	-46.11	.36134	-1.52	-3.87	224	
8	1	3	1	37.17	37.60	-8.80	36.55	.42520	-.43	-1.37	103	
8	1	5	1	15.68	15.63	11.61	-10.46	.53022	.05	.28	318	
8	1	7	1	22.01	22.23	-14.52	-16.84	.65695	-.22	-.95	230	
8	2	-8	1	24.92	25.24	-24.99	3.51	.72838	-.31	-1.48	172	
8	2	-6	1	20.26	19.38	-15.36	11.82	.59603	.88	4.53	142	
8	2	-4	1	36.42	36.00	-10.83	-34.34	.47968	.42	1.22	253	
8	2	-2	1	84.66	84.98	-83.25	17.05	.39375	-.31	-.76	168	
8	2	0	1	94.65	96.95	3.00	96.90	.36070	-2.29	-5.90	88	
8	2	2	1	72.32	71.64	52.20	-49.06	.39405	.68	1.66	317	
8	2	4	1	88.45	89.39	-78.42	-42.90	.48016	-.94	-1.98	209	
8	2	6	1	46.79	46.88	-39.53	25.20	.59662	-.08	-.21	147	
8	2	8	1	18.52	18.26	-12.82	13.00	.72901	.26	1.23	134	
8	3	-7	1	9.68	9.65	-6.33	-7.28	.66812	.03	.12	229	
8	3	-5	1	29.41	28.98	-24.73	15.10	.54421	.43	1.60	148	
8	3	-3	1	22.41	22.47	22.46	.44	.44279	-.06	-.29	1	
8	3	-1	1	52.34	52.35	30.13	-42.80	.38219	-.01	-.02	306	
8	3	1	1	21.53	22.27	-21.06	7.23	.38234	-.74	-3.36	161	
8	3	3	1	38.32	38.36	-8.49	37.30	.44318	-.04	-.11	102	
8	3	5	1	13.11	12.51	12.33	2.14	.54475	.60	3.35	9	
8	3	7	1	8.05	7.96	5.10	-6.12	.66873	.09	.31	310	
8	4	-8	1	9.81	10.19	9.79	-2.83	.74428	-.38	-1.30	344	
8	4	-6	1	52.85	53.43	50.70	-16.88	.61537	-.59	-1.02	342	
8	4	-4	1	34.49	33.98	-5.42	-33.54	.50350	.52	1.78	261	
8	4	-2	1	37.60	37.08	-30.27	21.42	.42245	.52	1.66	144	
8	4	0	1	60.75	59.56	48.18	35.02	.39182	1.19	2.87	36	
8	4	2	1	68.60	68.78	65.73	-20.26	.42272	-.18	-.42	343	
8	4	4	1	58.06	59.21	44.36	-39.22	.50396	-1.15	-2.35	319	
8	4	6	1	14.32	13.82	4.36	13.11	.61593	.50	2.53	71	
8	4	8	1	23.13	23.59	23.49	-2.17	.74490	-.45	-2.17	355	
8	5	-7	1	16.19	16.31	.31	-16.30	.69110	-.11	-.52	272	

FC

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
8	5	-5	1		11.38	11.21	-11.18	.67	.57219	.17	.84	176	
8	5	-3	1		39.17	39.98	31.69	24.36	.47675	-.80	-2.37	37	
8	5	-1	1		56.32	55.99	14.94	-53.96	.42106	.33	.75	286	
8	5	1	1		79.24	80.51	-57.95	-55.89	.42120	-1.27	-2.94	224	
8	5	3	1		33.22	33.55	-12.38	31.18	.47711	-.33	-.96	111	
8	5	5	1		35.14	35.39	31.54	16.05	.57269	-.25	-.78	26	
8	5	7	1		5.84	5.47	-5.01	2.19	.69169	.37	.97	156	
8	6	-6	1		31.01	30.78	-28.92	-10.53	.64631	.23	.84	201	
8	6	-4	1		58.22	59.02	-33.75	-48.41	.54088	-.80	-1.54	236	
8	6	-2	1		56.14	55.66	-55.37	-5.69	.46637	.49	1.04	186	
8	6	0	1		43.50	42.96	-8.80	42.05	.43881	.53	1.18	101	
8	6	2	1		25.32	24.82	23.82	6.98	.46662	.50	2.08	16	
8	6	4	1		51.94	52.17	-52.17	-.73	.54131	-.24	-.45	181	
8	6	6	1		24.59	24.11	-23.86	-3.47	.64685	.47	2.11	189	
8	7	-7	1	L	2.28	1.81	.07	-1.80	.72420	.48	.49	273	
8	7	-5	1		19.16	18.86	5.29	18.10	.61175	.30	1.59	73	
8	7	-3	1		21.21	21.92	3.55	-21.63	.52358	-.70	-3.37	280	
8	7	-1	1		27.90	28.21	11.57	-25.73	.47343	-.31	-1.10	295	
8	7	1	1		37.60	37.80	-25.77	27.65	.47355	-.19	-.57	132	
8	7	3	1		25.90	25.82	-16.81	19.60	.52391	.08	.34	130	
8	7	5	1		27.81	28.22	17.75	21.94	.61223	-.41	-1.54	51	
8	7	7	1		17.24	16.59	14.91	7.27	.72476	.65	2.93	25	
8	8	-6	1		39.97	39.92	38.51	-10.53	.68729	.05	.13	345	
8	8	-4	1		30.03	29.76	29.62	-2.88	.58924	.27	.94	355	
8	8	-2	1		33.12	32.83	-11.14	30.88	.52168	.29	.98	109	
8	8	0	1		11.91	11.38	-.18	11.38	.49720	.53	2.93	90	
8	8	2	1		44.45	44.66	41.96	-15.28	.52190	-.21	-.59	340	
8	8	4	1		37.27	37.93	32.25	-19.97	.58963	-.66	-2.05	329	
8	8	6	1		6.86	6.52	-2.01	6.20	.68779	.33	1.00	107	
8	9	-5	1		20.82	20.66	2.51	20.51	.66083	.16	.83	83	
8	9	-3	1		23.04	22.63	22.63	-.01	.58016	.41	2.00	0	
8	9	-1	1		26.92	26.07	4.91	-25.60	.53534	.85	3.51	281	
8	9	1	1		34.81	35.53	-29.42	-19.91	.53545	-.72	-2.35	215	
8	9	3	1		35.23	34.91	-33.47	9.93	.58046	.32	.99	163	
8	9	5	1		10.37	10.53	1.38	10.43	.66127	-.15	-.62	82	
8	10	-6	1		29.45	29.14	-26.16	-12.85	.73663	.31	1.17	207	
8	10	-4	1		38.17	37.88	-37.30	-6.58	.64611	.29	.83	191	
8	10	-2	1		19.44	19.31	-18.30	6.16	.58516	.14	.77	161	
8	10	0	1		20.78	20.48	-14.14	14.81	.56345	.30	1.52	133	
8	10	2	1		26.04	26.00	-11.27	23.43	.58536	.04	.18	115	
8	10	4	1		21.37	21.34	-21.34	-.31	.64647	.03	.14	181	
8	10	6	1		39.69	39.37	-19.31	-34.32	.73710	.31	.95	241	
8	11	-5	1		33.13	32.94	28.34	16.80	.71747	.19	.62	30	
8	11	-3	1		11.15	10.97	10.92	1.11	.64394	.17	.73	5	
8	11	-1	1	L	2.88	3.91	3.91	-.01	.60388	-1.03	-1.63	0	
8	11	1	1		12.20	11.52	-11.52	.18	.60397	.68	3.28	179	
8	11	3	1		6.88	7.62	-7.61	-.44	.64421	-.74	-2.33	184	
8	11	5	1		21.10	20.80	6.72	19.68	.71788	.30	1.47	71	
8	12	-4	1		21.32	21.60	15.89	14.63	.70947	-.27	-1.31	42	
8	12	-2	1		26.88	26.57	24.38	10.56	.65444	.32	1.21	23	
8	12	0	1		18.97	18.45	17.36	-6.25	.63510	.53	2.76	341	
8	12	2	1		21.58	21.18	21.13	-1.40	.65462	.40	2.04	357	
8	12	4	1		37.38	37.74	34.13	-16.12	.70979	-.36	-1.11	335	
8	13	-3	1		25.77	25.69	12.91	-22.21	.71298	.08	.33	301	
8	13	-1	1		15.84	15.25	-10.29	-11.25	.67702	.59	2.73	228	
8	13	1	1		17.87	18.41	13.15	-12.89	.67710	-.54	-2.65	316	

FC

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
8	13	3	1		16.06	15.99	-14.48	-6.80	.71323	.07	.31	206	
8	14	-2	1		7.67	7.52	-4.64	-5.92	.72786	.15	.45	232	
8	14	0	1		17.47	17.77	-16.67	-6.16	.71052	-.30	-1.37	201	
8	14	2	1		18.38	18.63	-15.07	10.95	.72802	-.25	-1.16	143	
8	15	-1	1	L	1.98	2.97	2.83	-.88	.75343	-.98	-.84	343	
8	15	1	1		9.90	9.67	4.96	-8.29	.75350	.24	.81	301	
9	1	-7	1		13.33	12.87	12.73	1.85	.68059	.46	2.07	8	
9	1	-5	1		29.42	28.45	-7.94	27.32	.55947	.98	3.56	106	
9	1	-3	1		52.75	53.03	9.68	52.14	.46142	-.27	-.59	79	
9	1	-1	1		28.49	27.69	5.71	27.09	.40364	.81	3.22	78	
9	1	1	1		84.23	86.27	-29.29	81.14	.40381	-2.03	-4.86	109	
9	1	3	1		29.83	29.28	-4.92	28.87	.46185	.55	1.99	99	
9	1	5	1		38.08	38.69	35.24	15.97	.56005	-.61	-1.59	24	
9	1	7	1		27.93	27.22	-11.51	24.66	.68126	.71	2.90	115	
9	2	-8	1		17.61	17.18	-14.11	9.80	.75031	.43	1.89	145	
9	2	-6	1		11.91	11.82	-10.65	5.13	.62265	.09	.42	154	
9	2	-4	1		13.86	13.50	9.53	-9.55	.51239	.36	2.11	315	
9	2	-2	1		10.72	11.15	10.57	3.56	.43303	-.43	-2.64	18	
9	2	0	1		18.71	18.27	16.46	-7.92	.40322	.44	2.55	335	
9	2	2	1		28.15	28.30	27.99	-4.12	.43333	-.14	-.54	352	
9	2	4	1		7.50	6.51	-5.40	3.63	.51290	1.00	4.51	146	
9	2	6	1		12.85	12.68	-12.55	-1.82	.62328	.17	.83	189	
9	2	8	1		6.47	6.41	5.16	3.81	.75100	.06	.15	36	
9	3	-7	1		19.73	19.51	-2.31	-19.37	.69197	.22	1.10	264	
9	3	-5	1		24.00	24.23	-9.01	-22.50	.57325	-.23	-1.06	249	
9	3	-3	1		42.33	43.12	-3.73	-42.96	.47804	-.80	-2.37	266	
9	3	-1	1		63.58	62.93	31.62	-54.41	.42254	.65	1.50	301	
9	3	1	1		71.72	73.43	10.09	-72.73	.42270	-1.72	-3.95	278	
9	3	3	1		30.35	30.64	27.12	-14.27	.47845	-.29	-1.03	333	
9	3	5	1		32.52	31.62	12.48	-29.05	.57382	.90	2.78	294	
9	3	7	1		30.05	31.13	-8.58	-29.93	.69263	-1.08	-3.66	255	
9	4	-6	1		11.95	11.54	6.62	9.45	.64119	.41	1.86	54	
9	4	-4	1		24.36	24.24	16.64	-17.63	.53476	.11	.51	314	
9	4	-2	1		37.60	38.23	-38.23	-.81	.45927	-.63	-1.92	182	
9	4	0	1		28.22	28.47	9.68	26.77	.43129	-.25	-.95	70	
9	4	2	1		46.24	45.94	38.36	-25.27	.45936	.30	.64	327	
9	4	4	1		22.84	22.61	-15.34	-16.61	.53525	.23	1.11	228	
9	4	6	1		23.44	23.47	16.99	16.19	.64179	-.03	-.12	43	
9	5	-7	1		11.74	10.74	10.66	1.33	.71418	1.00	4.06	7	
9	5	-5	1		33.66	34.51	-16.76	30.17	.59987	-.86	-2.52	119	
9	5	-3	1		49.74	49.71	16.81	46.78	.50966	.03	.07	70	
9	5	-1	1		17.96	18.19	13.82	11.83	.45801	-.23	-1.34	40	
9	5	1	1		83.08	83.78	-39.71	73.77	.45815	-.70	-1.54	118	
9	5	3	1		46.51	47.08	-11.47	45.66	.51004	-.57	-1.13	104	
9	5	5	1		35.67	35.20	31.80	15.10	.60041	.47	1.42	25	
9	5	7	1		20.27	20.23	-20.21	.76	.71482	.04	.22	177	
9	6	-6	1		21.17	21.07	-2.47	20.92	.67094	.10	.53	96	
9	6	-4	1		17.93	18.13	17.59	-4.37	.57009	-.20	-1.10	347	
9	6	-2	1		16.64	17.15	-3.04	16.88	.49997	-.51	-3.04	100	
9	6	0	1		11.10	10.86	-3.52	10.28	.47439	.23	1.31	108	
9	6	2	1		16.30	16.03	13.52	-8.62	.50023	.27	1.57	328	
9	6	4	1		26.76	26.84	-26.82	-.97	.57055	-.08	-.32	183	
9	6	6	1		23.72	23.87	-23.11	6.01	.67152	-.15	-.75	165	
9	7	-7	1		38.19	38.35	23.96	-29.95	.74625	-.16	-.48	309	
9	7	-5	1		26.30	26.01	-13.34	-22.33	.63772	.28	1.20	240	
9	7	-3	1		12.06	12.60	-7.06	-10.43	.55371	-.54	-2.80	236	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
9	7	-1	1	50.66	50.92	4.48	-50.73	.50657	-.27	-.54	276	
9	7	1	1	69.53	69.71	-48.89	-49.70	.50670	-.18	-.37	226	
9	7	3	1	23.35	23.40	13.54	19.09	.55406	-.06	-.26	54	
9	7	5	1	54.60	55.21	36.73	-41.22	.63823	-.61	-1.04	312	
9	7	7	1	35.52	36.10	-9.67	-34.78	.74686	-.58	-1.69	255	
9	8	-6	1	15.27	15.46	12.07	9.66	.71050	-.18	-.82	38	
9	8	-4	1	21.56	21.31	3.60	-21.00	.61616	.26	1.30	280	
9	8	-2	1	46.29	45.85	-44.06	-12.65	.55192	.45	1.19	197	
9	8	0	1	34.83	34.77	8.40	33.74	.52886	.06	.19	76	
9	8	2	1	23.31	22.93	13.80	-18.31	.55216	.38	1.77	307	
9	8	4	1	30.92	31.23	-28.49	-12.81	.61658	-.31	-1.06	205	
9	8	6	1	27.89	27.59	12.01	24.83	.71105	.30	1.20	64	
9	9	-5	1	20.55	20.18	-12.25	16.04	.68494	.36	1.82	127	
9	9	-3	1	43.09	42.87	22.83	36.25	.60750	.22	.53	57	
9	9	-1	1	6.03	6.19	-4.40	4.36	.56486	-.16	-.53	135	
9	9	1	1	49.96	50.12	-32.86	37.85	.56498	-.16	-.30	130	
9	9	3	1	54.09	54.11	-14.21	52.21	.60782	-.02	-.03	105	
9	9	5	1	29.69	29.10	13.62	25.71	.68542	.59	2.23	62	
9	10	-4	1	11.77	11.57	11.21	-2.87	.67076	.20	.85	346	
9	10	-2	1	6.16	6.32	-4.84	4.05	.61228	-.16	-.49	140	
9	10	0	1	20.67	20.87	1.63	20.80	.59157	-.20	-1.02	85	
9	10	2	1	18.29	18.16	4.91	-17.48	.61249	.13	.72	286	
9	10	4	1	21.02	21.21	-18.54	-10.30	.67115	-.19	-.98	210	
9	11	-5	1	33.90	33.67	-17.40	-28.82	.73974	.23	.74	239	
9	11	-3	1	14.82	14.56	2.84	-14.28	.66867	.26	1.25	282	
9	11	-1	1	50.69	51.02	5.80	-50.69	.63019	-.34	-.81	277	
9	11	1	1	45.89	46.01	-28.45	-36.16	.63030	-.12	-.29	232	
9	11	3	1	38.77	38.17	20.86	31.96	.66897	.60	1.66	56	
9	11	5	1	44.29	45.20	33.35	-30.50	.74018	-.91	-2.33	318	
9	12	-4	1	10.20	10.28	-4.31	-9.34	.73198	-.08	-.28	246	
9	12	-2	1	17.78	17.83	-7.91	-15.98	.67879	-.05	-.22	244	
9	12	0	1	28.33	28.76	28.50	3.82	.66018	-.43	-1.69	7	
9	12	2	1	24.42	24.91	15.38	-19.59	.67899	-.49	-2.06	309	
9	12	4	1	13.56	13.94	-11.92	-7.23	.73234	-.38	-1.58	212	
9	13	-3	1	37.46	37.21	21.88	30.10	.73540	.25	.75	53	
9	13	-1	1	6.87	7.64	5.03	5.75	.70059	-.77	-2.14	48	
9	13	1	1	15.85	16.22	-11.67	11.27	.70068	-.37	-1.65	135	
9	13	3	1	26.07	25.94	-5.78	25.29	.73566	.13	.58	102	
9	14	-2	1	13.77	13.91	6.86	12.10	.74984	-.14	-.54	60	
9	14	0	1	20.34	20.32	12.24	16.22	.73303	.02	.09	52	
9	14	2	1	15.51	15.39	4.29	-14.78	.75001	.11	.47	287	
10	0	-6	1	46.79	46.63	16.51	-43.61	.64510	.16	.37	291	
10	0	-4	1	14.31	14.22	-.03	14.22	.53946	.09	.51	90	
10	0	-2	1	64.01	64.09	37.61	51.90	.46475	-.08	-.17	54	
10	0	0	1	14.30	13.44	-3.47	-12.99	.43713	.86	5.83	256	
10	0	2	1	46.70	47.53	42.79	-20.68	.46506	-.83	-1.79	335	
10	0	4	1	54.05	54.01	50.82	18.28	.54000	.03	.07	19	
10	0	6	1	28.78	29.24	25.29	-14.68	.64577	-.46	-1.69	330	
10	1	-7	1	26.00	25.78	-22.86	11.92	.70673	.22	.98	152	
10	1	-5	1	25.60	25.41	15.97	19.76	.59099	.19	.82	51	
10	1	-3	1	37.79	36.40	5.85	-35.93	.49919	1.39	3.97	280	
10	1	-1	1	5.99	6.47	1.41	-6.32	.44635	-.48	-2.01	283	
10	1	1	1	13.95	13.57	11.32	7.48	.44651	.38	2.47	33	
10	1	3	1	29.97	29.70	-25.42	-15.36	.49963	.27	.91	212	
10	1	5	1	38.60	39.77	-12.22	37.64	.59161	-1.17	-2.92	107	
10	1	7	1	36.84	36.87	28.81	23.01	.70744	-.03	-.10	38	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
10	2	-6	1	51.23	51.15	-32.35	-39.62	.65112	.08	.19	231	
10	2	-4	1	55.09	55.09	-53.29	-13.95	.54665	.00	.01	195	
10	2	-2	1	31.18	30.60	-30.49	-2.63	.47308	.58	2.07	185	
10	2	0	1	13.07	12.48	-2.68	-12.19	.44597	.59	3.74	258	
10	2	2	1	68.19	69.76	-30.53	62.73	.47338	-1.57	-3.34	115	
10	2	4	1	10.67	9.23	8.46	3.68	.54718	1.44	7.30	23	
10	2	6	1	52.44	52.39	-24.32	-46.40	.65179	.06	.13	243	
10	3	-7	1	23.30	23.31	-20.99	10.14	.71769	-.01	-.05	154	
10	3	-5	1	36.37	36.69	21.89	29.44	.60406	-.32	-.96	53	
10	3	-3	1	27.59	27.55	27.54	.73	.51460	.03	.12	1	
10	3	-1	1	10.59	9.59	-7.03	-6.52	.46351	1.00	5.70	223	
10	3	1	1	21.04	20.54	-6.11	-19.61	.46367	.50	2.44	253	
10	3	3	1	26.27	26.61	-8.99	-25.05	.51502	-.35	-1.32	251	
10	3	5	1	28.57	28.39	-17.83	22.08	.60466	.18	.69	128	
10	3	7	1	24.05	24.33	16.16	18.18	.71840	-.28	-1.25	48	
10	4	-6	1	25.83	25.87	20.49	-15.79	.66887	-.04	-.16	323	
10	4	-4	1	23.04	23.48	-9.18	21.61	.56767	-.44	-2.01	113	
10	4	-2	1	52.61	53.17	37.16	38.03	.49722	-.57	-1.16	45	
10	4	0	1	8.14	7.64	4.62	6.09	.47150	.50	2.44	52	
10	4	2	1	28.98	29.34	26.07	-13.46	.49751	-.36	-1.25	333	
10	4	4	1	40.86	40.54	39.92	-7.07	.56818	.31	.81	350	
10	4	6	1	31.20	31.24	17.10	-26.15	.66951	-.04	-.15	304	
10	5	-7	1	33.05	33.05	-19.62	26.60	.73913	.00	.00	126	
10	5	-5	1	26.41	26.22	10.76	23.92	.62938	.19	.81	65	
10	5	-3	1	9.83	9.77	3.46	-9.13	.54409	.06	.31	291	
10	5	-1	1	3.51	3.59	-3.17	-1.68	.49605	-.07	-.18	208	
10	5	1	1	8.67	5.92	4.80	-3.46	.49620	2.75	13.73	325	
10	5	3	1	38.38	38.59	-38.42	-3.66	.54449	-.21	-.55	186	
10	5	5	1	19.29	19.38	-12.35	14.94	.62995	-.10	-.49	129	
10	5	7	1	27.29	27.16	27.13	-1.25	.73981	.13	.48	358	
10	6	-6	1	17.86	17.55	-13.79	-10.86	.69744	.31	1.48	219	
10	6	-4	1	26.11	25.97	-25.91	1.83	.60107	.14	.59	175	
10	6	-2	1	37.70	37.58	-36.99	6.60	.53503	.12	.32	169	
10	6	0	1	8.66	8.02	-6.07	5.25	.51122	.63	3.01	139	
10	6	2	1	26.45	26.25	-23.63	11.44	.53530	.20	.74	154	
10	6	4	1	15.94	15.87	.03	-15.87	.60155	.08	.41	271	
10	6	6	1	33.86	33.56	-25.78	-21.46	.69806	.30	1.04	220	
10	7	-5	1	23.28	23.04	7.81	21.67	.66555	.24	1.17	70	
10	7	-3	1	42.80	43.55	42.94	7.24	.58556	-.74	-1.89	9	
10	7	-1	1	23.39	23.29	8.10	-21.83	.54121	.10	.44	291	
10	7	1	1	27.08	27.06	-3.83	-26.79	.54135	.02	.07	262	
10	7	3	1	3.58	3.92	-.55	-3.88	.58593	-.34	-.72	262	
10	7	5	1	20.32	20.50	-18.80	8.17	.66610	-.17	-.89	156	
10	8	-6	1	24.55	24.23	23.87	-4.14	.73557	.32	1.47	351	
10	8	-4	1	11.21	10.60	-7.90	-7.07	.64493	.61	2.55	222	
10	8	-2	1	28.07	27.46	26.94	-5.28	.58387	.62	2.41	349	
10	8	0	1	28.14	27.96	16.78	22.36	.56214	.18	.72	53	
10	8	2	1	32.31	32.01	31.13	7.44	.58412	.30	.92	13	
10	8	4	1	38.54	38.23	35.75	-13.54	.64538	.31	.89	340	
10	8	6	1	18.47	18.03	16.22	-7.89	.73616	.43	1.99	335	
10	9	-5	1	8.65	8.84	8.45	-2.61	.71093	-.19	-.63	343	
10	9	-3	1	12.59	12.53	7.28	10.20	.63666	.07	.30	54	
10	9	-1	1	15.79	15.85	-.94	-15.83	.59613	-.07	-.35	267	
10	9	1	1	26.53	26.19	-14.49	-21.82	.59625	.35	1.43	237	
10	9	3	1	28.93	29.01	-18.55	22.31	.63700	-.08	-.30	129	
10	9	5	1	22.70	22.64	13.27	18.34	.71144	.06	.28	54	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
10	10	-4	1	23.68	23.53	-8.13	-22.08	.69728	.15	.70	250	
10	10	-2	1	42.45	42.29	-42.14	-3.56	.64123	.15	.36	185	
10	10	0	1	15.94	15.90	-2.34	15.72	.62150	.04	.22	98	
10	10	2	1	3.84	4.56	-4.40	-1.20	.64145	-.72	-1.38	196	
10	10	4	1	15.48	15.79	-15.48	-3.12	.69769	-.31	-1.44	192	
10	11	-3	1	27.83	27.56	24.76	-12.11	.69528	.27	1.07	334	
10	11	-1	1	34.18	34.10	20.33	-27.38	.65836	.08	.27	307	
10	11	1	1	10.61	10.67	-10.19	-3.16	.65847	-.06	-.23	198	
10	11	3	1	18.44	18.30	-7.57	16.66	.69559	.15	.70	114	
10	12	-4	1	22.76	22.65	13.94	-17.85	.75636	.11	.51	308	
10	12	-2	1	10.81	11.08	-9.41	-5.85	.70502	-.27	-1.01	212	
10	12	0	1	30.02	30.54	-7.29	29.65	.68712	-.51	-1.74	103	
10	12	2	1	40.21	40.04	39.80	4.35	.70522	.18	.47	6	
10	12	4	1	23.85	23.67	18.63	-14.61	.75674	.18	.81	322	
10	13	-1	1	11.62	12.29	2.31	-12.07	.72604	-.67	-2.54	281	
10	13	1	1	41.18	41.06	-36.15	-19.48	.72613	.12	.30	209	
10	14	0	1	20.89	21.18	-1.06	21.16	.75739	-.29	-1.33	92	
11	1	-7	1	25.91	25.08	-9.27	23.31	.73453	.83	3.74	111	
11	1	-5	1	29.99	29.67	.28	29.67	.62399	.32	1.05	89	
11	1	-3	1	9.94	9.27	2.94	8.79	.53787	.67	3.27	71	
11	1	-1	1	49.25	50.65	8.79	49.88	.48923	-1.40	-2.88	80	
11	1	1	1	22.22	22.76	-.73	22.75	.48939	-.54	-2.59	91	
11	1	3	1	26.57	27.56	-13.88	23.81	.53831	-.99	-3.71	120	
11	1	5	1	20.06	20.65	-8.78	18.68	.62463	-.59	-2.87	115	
11	1	7	1 L	3.45	1.07	-.62	-.87	.73529	2.38	3.75	235	
11	2	-6	1	12.71	12.62	9.14	-8.70	.68121	.09	.39	317	
11	2	-4	1	16.04	15.76	-15.51	2.80	.58217	.28	1.54	169	
11	2	-2	1	7.44	8.02	-7.22	3.49	.51373	-.58	-2.53	154	
11	2	0	1	14.82	14.11	-14.00	1.74	.48890	.71	4.42	172	
11	2	2	1	23.20	23.37	-23.19	2.89	.51404	-.17	-.77	172	
11	2	4	1	10.84	10.29	10.11	-1.90	.58272	.55	2.67	350	
11	2	6	1	15.36	15.92	15.61	-3.13	.68191	-.56	-2.61	349	
11	3	-7	1	7.54	6.35	1.28	-6.22	.74509	1.19	3.54	282	
11	3	-5	1	41.69	40.56	18.92	-35.87	.63638	1.13	2.69	298	
11	3	-3	1	34.82	35.13	-14.41	-32.04	.55219	-.31	-1.00	246	
11	3	-1	1	70.44	72.32	-61.97	-37.29	.50494	-1.88	-3.83	212	
11	3	1	1	8.68	8.12	5.78	-5.70	.50510	.56	2.67	316	
11	3	3	1	27.74	28.50	14.16	-24.73	.55262	-.76	-2.67	300	
11	3	5	1	23.87	23.87	-13.69	-19.55	.63701	.01	.03	236	
11	3	7	1	18.76	19.30	19.28	-.76	.74584	-.53	-2.43	358	
11	4	-6	1	12.78	12.73	-3.71	-12.17	.69819	.06	.23	254	
11	4	-4	1	28.09	28.44	-27.93	5.36	.60195	-.35	-1.32	169	
11	4	-2	1	9.84	9.93	8.86	4.48	.53604	-.09	-.43	26	
11	4	0	1	6.65	6.38	2.55	-5.85	.51229	.26	1.08	294	
11	4	2	1	16.40	16.66	-15.83	5.20	.53634	-.27	-1.55	161	
11	4	4	1	13.55	13.32	10.88	7.68	.60248	.23	1.16	35	
11	4	6	1	20.35	20.24	-17.43	-10.28	.69887	.12	.56	211	
11	5	-5	1	31.52	30.91	21.96	21.76	.66046	.60	2.17	44	
11	5	-3	1	11.77	10.15	-1.91	-9.97	.57978	1.62	8.10	260	
11	5	-1	1	56.21	56.15	-21.82	51.74	.53497	.06	.12	112	
11	5	1	1	39.51	39.80	4.98	39.28	.53512	-.09	-.25	82	
11	5	3	1	14.45	14.47	2.89	14.18	.58019	-.02	-.11	78	
11	5	5	1	16.47	15.96	-7.00	14.34	.66106	.51	2.52	116	
11	6	-6	1	30.91	30.77	6.93	-29.98	.72560	.14	.44	284	
11	6	-4	1	22.00	22.17	-22.16	.66	.63355	-.16	-.76	178	
11	6	-2	1	20.13	19.83	16.36	11.20	.57129	.30	1.70	34	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
11	6	0	1	12.82	13.46	8.68	-10.28	.54907	-.63	-3.24	311	
11	6	2	1	21.29	21.46	-17.52	12.39	.57157	-.17	-.86	144	
11	6	4	1	22.06	22.33	21.55	5.82	.63405	-.26	-1.33	15	
11	6	6	1	23.95	24.26	21.43	-11.37	.72626	-.31	-1.47	333	
11	7	-5	1	38.52	38.19	26.40	-27.60	.69502	.33	.88	314	
11	7	-3	1	49.09	48.09	1.69	-48.06	.61886	1.00	2.46	273	
11	7	-1	1	43.00	43.81	-33.52	-28.20	.57709	-.81	-2.06	221	
11	7	1	1	39.86	39.61	39.59	1.22	.57723	.26	.65	1	
11	7	3	1	40.16	39.88	24.44	-31.51	.61924	.28	.69	308	
11	7	5	1	27.46	28.05	-27.03	-7.47	.69559	-.58	-2.33	196	
11	8	-4	1	24.75	24.46	-18.86	15.57	.67530	.30	1.34	140	
11	8	-2	1	26.79	26.85	18.57	19.39	.61727	-.05	-.20	46	
11	8	0	1	21.53	21.95	17.67	-13.02	.59676	-.42	-2.11	324	
11	8	2	1	9.46	9.14	.02	-9.14	.61753	.31	1.30	271	
11	8	4	1	12.67	12.77	11.57	5.41	.67577	-.11	-.47	25	
11	9	-5	1	39.33	39.08	25.03	30.01	.73858	.25	.74	50	
11	9	-3	1	18.31	17.85	-3.11	-17.58	.66742	.46	2.29	260	
11	9	-1	1	47.23	46.33	-16.07	43.46	.62888	.90	2.15	110	
[illegible]	9	1	1	47.35	47.25	2.66	47.18	.62901	.10	.24	86	
11	9	3	1	7.25	5.82	5.29	-2.43	.66777	1.43	4.65	336	
11	9	5	1	6.25	6.65	-1.92	6.37	.73912	-.40	-1.00	106	
11	10	-4	1	20.06	20.09	-17.84	9.23	.72546	-.03	-.13	152	
11	10	-2	1	34.51	34.50	22.91	25.80	.67178	.01	.02	48	
11	10	0	1	29.82	30.23	14.18	-26.70	.65299	-.41	-1.44	298	
11	10	2	1	12.22	12.06	-7.78	9.21	.57202	.16	.68	130	
11	10	4	1	4.58	5.73	4.02	4.09	.72590	-1.15	-2.31	45	
11	11	-3	1	29.11	29.01	-.37	-29.00	.72354	.10	.40	270	
11	11	-1	1	30.19	29.78	-19.62	-22.40	.68816	.41	1.42	229	
11	11	1	1	16.88	16.79	14.63	-8.24	.68827	.09	.41	331	
11	11	3	1	40.52	41.10	12.71	-39.09	.72387	-.58	-1.52	289	
11	12	-2	1	19.10	18.93	-1.49	18.87	.73292	.17	.75	94	
11	12	0	1	6.52	7.04	3.05	-6.35	.71573	-.52	-1.42	296	
11	12	2	1	19.05	19.43	-8.69	-17.38	.73313	-.38	-1.74	244	
11	13	-1	1	34.10	34.85	-22.58	26.55	.75316	-.75	-2.63	130	
11	13	1	1	40.67	40.43	-7.68	39.69	.75326	.25	.72	100	
12	0	-6	1	31.80	31.64	25.18	19.16	.70721	.16	.53	37	
12	0	-4	1	53.93	53.90	32.22	-43.22	.61240	.03	.05	307	
12	0	-2	1	26.68	26.87	-23.05	-13.81	.54776	-.19	-.78	211	
12	0	0	1	71.83	71.78	26.22	66.82	.52456	.05	.10	68	
12	0	2	1	67.91	69.69	69.65	-2.47	.54808	-1.79	-3.41	358	
12	0	4	1	51.88	52.85	26.82	-45.54	.61297	-.97	-1.68	301	
12	0	6	1	23.62	22.49	21.79	-5.58	.70794	1.13	5.49	346	
12	1	-5	1	19.90	19.53	-19.48	1.29	.65824	.37	1.90	176	
12	1	-3	1	50.53	50.54	9.24	49.69	.57726	-.01	-.02	79	
12	1	-1	1	34.82	34.96	32.63	-12.55	.53225	-.13	-.44	339	
12	1	1	1	49.58	50.55	-14.46	-48.43	.53241	-.96	-1.87	254	
12	1	3	1	21.86	22.00	-19.18	10.79	.57771	-.15	-.69	150	
12	1	5	1	9.02	9.74	9.74	.17	.65890	-.72	-2.76	0	
12	2	-6	1	13.75	13.74	.39	13.74	.71271	.01	.03	88	
12	2	-4	1	28.05	27.08	-26.33	-6.33	.61874	.97	3.60	194	
12	2	-2	1	59.73	60.29	-59.59	-9.13	.55484	-.55	-1.05	189	
12	2	0	1	58.67	59.90	-35.82	48.01	.53195	-1.23	-2.39	126	
12	2	2	1	20.57	20.52	20.29	3.05	.55516	.06	.29	8	
12	2	4	1	47.02	47.77	-15.50	-45.18	.61931	-.75	-1.82	252	
12	2	6	1	62.66	63.59	-63.43	4.55	.71344	-.94	-1.46	175	
12	3	-5	1	25.17	25.31	-25.30	-.80	.66999	-.15	-.59	182	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
12	3	-3	1	17.28	16.99	9.70	13.94	.59063	.29	1.58	55	
12	3	-1	1	39.51	40.14	34.77	-20.06	.54672	-.63	-1.68	331	
12	3	1	1	23.45	23.79	-12.38	-20.32	.54688	-.34	-1.49	239	
12	3	3	1	42.33	42.63	-31.29	28.96	.59107	-.30	-.74	137	
12	3	5	1	12.15	11.89	7.83	8.94	.67064	.27	1.17	48	
12	4	-6	1	25.86	25.77	25.71	-1.76	.72895	.09	.38	357	
12	4	-4	1	62.64	62.61	46.39	-42.05	.63739	.02	.04	318	
12	4	-2	1	21.95	21.32	-20.23	-6.72	.57556	.63	3.06	199	
12	4	0	1	50.39	50.77	16.41	48.04	.55352	-.37	-.70	71	
12	4	2	1	67.83	67.72	67.65	3.06	.57586	.11	.20	2	
12	4	4	1	33.06	33.04	27.93	-17.65	.63793	.01	.04	328	
12	4	6	1	25.76	25.62	25.30	4.02	.72967	.14	.61	9	
12	5	-5	1	4.61	3.93	-2.19	-3.26	.69291	.69	1.48	237	
12	5	-3	1	30.72	31.05	11.90	28.68	.61650	-.33	-1.10	67	
12	5	-1	1	35.25	34.03	32.80	-9.05	.57457	1.22	3.80	345	
12	5	1	1	36.18	36.00	-15.61	-32.44	.57472	.18	.56	245	
12	5	3	1	11.44	11.23	-10.26	4.55	.61692	.22	.99	156	
12	5	5	1	26.44	26.72	10.63	24.52	.69353	-.29	-1.21	66	
12	6	-6	1	4.69	4.15	-1.83	-3.73	.75525	.54	1.07	244	
12	6	-4	1	39.81	39.67	-33.24	-21.65	.66731	.14	.38	214	
12	6	-2	1	42.97	43.32	-40.46	-15.46	.60853	-.35	-.84	201	
12	6	0	1	38.57	38.57	-28.80	25.65	.58773	.00	.01	138	
12	6	2	1	35.10	34.79	.44	34.79	.60881	.31	.94	89	
12	6	4	1	22.16	22.39	-18.99	-11.85	.66783	-.22	-1.11	212	
12	6	6	1	44.68	45.18	-44.98	-4.29	.75594	-.50	-1.27	186	
12	7	-5	1	16.21	16.26	-13.53	9.02	.72592	-.05	-.23	146	
12	7	-3	1	8.34	7.90	7.25	-3.13	.65339	.44	1.61	337	
12	7	-1	1	21.86	21.70	10.84	-18.80	.61398	.16	.82	300	
12	7	1	1	24.68	24.52	-23.19	-7.95	.61412	.16	.71	199	
12	7	3	1	34.95	34.54	-28.50	19.51	.65379	.41	1.34	145	
12	7	5	1	16.81	16.98	6.95	15.49	.72652	-.17	-.77	65	
12	8	-4	1	43.14	42.99	41.52	-11.14	.70707	.15	.40	345	
12	8	-2	1	18.39	17.68	-13.26	11.69	.65189	.71	3.64	138	
12	8	0	1	12.42	11.73	.56	11.72	.63252	.68	3.16	87	
12	8	2	1	43.63	43.40	42.44	-9.09	.65215	.23	.52	348	
12	8	4	1	27.97	27.76	27.05	-6.23	.70756	.21	.82	348	
12	9	-3	1	6.37	6.22	6.20	.57	.69955	.14	.39	5	
12	9	-1	1	21.65	21.38	20.59	-5.75	.66290	.48	2.38	345	
12	9	1	1	13.19	12.93	-5.27	-11.81	.66303	.26	1.18	246	
12	9	3	1	23.18	23.58	-14.11	-18.89	.69992	-.40	-1.75	234	
12	10	-4	1	39.14	38.82	-38.29	-6.42	.75513	.32	.93	190	
12	10	-2	1	23.71	23.16	-22.79	-4.09	.70372	.55	2.53	191	
12	10	0	1	22.14	22.27	-22.16	2.23	.68581	-.14	-.66	174	
12	10	2	1	29.64	30.05	-19.09	23.21	.70397	-.41	-1.51	129	
12	10	4	1	10.76	10.47	-9.08	-5.22	.75559	.28	1.01	210	
12	11	-3	1	17.43	17.24	14.46	9.38	.75329	.19	.82	32	
12	11	-1	1	13.35	12.82	-8.58	-9.52	.71938	.54	2.20	228	
12	11	1	1	19.37	19.19	-9.14	-16.88	.71950	.18	.83	242	
12	11	3	1	9.96	10.54	-10.54	.15	.75363	-.58	-1.99	179	
12	12	0	1	19.56	19.55	19.02	-4.56	.74580	.00	.02	347	
13	1	-5	1	12.65	12.71	-11.53	5.34	.69355	-.06	-.26	155	
13	1	-3	1	24.76	24.66	-10.71	22.21	.61723	.10	.43	115	
13	1	-1	1	25.75	25.28	10.13	23.16	.57537	.47	2.00	66	
13	1	1	1	28.24	28.83	-26.02	12.42	.57554	-.60	-2.37	154	
13	1	3	1	34.26	34.59	-10.82	32.85	.61769	-.33	-.97	108	
13	1	5	1	6.04	6.58	3.73	5.42	.69423	-.54	-1.50	55	

FC

H	K	L	GRP		FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
13	2	-6	1		5.46	6.38	-6.28	-1.18	.74544	-.92	-2.08	191	
13	2	-4	1		7.99	8.15	8.14	-.44	.65619	-.16	-.56	357	
13	2	-2	1	L	2.84	3.43	2.74	2.07	.59633	-.60	-1.00	37	
13	2	0	1		12.71	13.04	12.68	3.05	.57510	-.33	-1.66	13	
13	2	2	1		16.93	17.22	17.01	2.71	.59664	-.29	-1.59	9	
13	2	4	1		10.36	10.17	-9.51	-3.60	.65676	.19	.78	201	
13	2	6	1		13.42	13.88	-13.49	-3.25	.74620	-.46	-1.88	194	
13	3	-5	1		9.92	9.73	5.19	-8.23	.70472	.19	.70	303	
13	3	-3	1		20.02	19.56	16.59	-10.36	.62976	.46	2.37	329	
13	3	-1	1		34.40	34.59	23.38	-25.49	.58879	-.18	-.57	313	
13	3	1	1		19.95	20.58	9.44	-18.29	.58895	-.63	-3.27	298	
13	3	3	1		20.09	19.25	6.62	-18.08	.63020	.84	4.30	291	
13	3	5	1		21.38	21.50	21.44	1.52	.70539	-.11	-.54	4	
13	4	-4	1		27.21	27.34	27.14	-3.35	.67380	-.14	-.52	353	
13	4	-2	1		13.17	13.06	-11.58	-6.04	.61565	.12	.56	208	
13	4	0	1		20.36	19.70	-10.30	16.79	.59511	.67	3.27	121	
13	4	2	1		24.86	24.99	24.93	1.69	.61596	-.12	-.54	3	
13	4	4	1		14.02	14.10	-6.17	-12.67	.67436	-.08	-.37	245	
13	5	-5	1		21.64	21.67	-20.95	5.54	.72654	-.02	-.10	165	
13	5	-3	1		26.82	26.90	-10.87	24.61	.65408	-.08	-.31	113	
13	5	-1	1		24.20	24.74	19.95	14.64	.61473	-.54	-2.33	36	
13	5	1	1		28.72	29.24	-29.03	3.50	.61489	-.52	-1.96	173	
13	5	3	1		45.89	46.09	-17.70	42.56	.65451	-.20	-.48	112	
13	5	5	1		12.98	13.89	9.90	9.74	.72718	-.91	-3.68	44	
13	6	-4	1	L	2.36	3.02	2.96	.62	.70217	-.66	-.74	11	
13	6	-2	1		18.59	18.12	-17.79	-3.43	.64658	.47	2.42	191	
13	6	0	1		9.16	9.67	3.92	8.84	.62705	-.51	-2.01	66	
13	6	2	1		20.84	20.96	17.80	-11.06	.64687	-.11	-.60	329	
13	6	4	1		25.27	25.69	-16.38	-19.79	.70271	-.42	-1.84	231	
13	7	-3	1	L	2.01	.64	.43	.47	.68896	1.37	1.36	47	
13	7	-1	1		35.30	35.36	11.25	-33.52	.65172	-.07	-.21	289	
13	7	1	1		41.20	41.68	-25.37	-33.06	.65186	-.47	-1.36	233	
13	7	3	1		8.11	8.85	-7.99	-3.80	.68937	-.73	-2.37	206	
13	8	-4	1		18.19	17.91	15.78	-8.47	.74006	.28	1.27	332	
13	8	-2	1		20.15	20.20	-13.93	-14.62	.68754	-.04	-.22	227	
13	8	0	1		26.85	26.30	-18.09	19.09	.66921	.55	2.11	133	
13	8	2	1		21.43	22.01	21.20	5.93	.68782	-.59	-2.68	15	
13	8	4	1		14.04	14.06	-5.60	-12.90	.74057	-.03	-.12	247	
13	9	-3	1		28.39	28.37	-5.30	27.87	.73288	.02	.06	100	
13	9	-1	1		11.02	11.34	9.30	6.49	.69799	-.32	-1.22	34	
13	9	1	1		20.02	20.29	-20.15	-2.38	.69813	-.27	-1.30	187	
13	9	3	1		50.49	51.27	-15.70	48.81	.73327	-.79	-1.68	107	
13	10	-2	1		19.15	19.40	-16.74	-9.81	.73687	-.25	-1.14	211	
13	10	0	1		23.36	24.00	4.93	23.49	.71980	-.63	-2.83	78	
13	10	2	1		19.29	19.29	7.59	-17.73	.73713	.00	.00	294	
13	11	-1	1		30.47	30.75	13.13	-27.80	.75184	-.28	-1.06	296	
13	11	1	1		29.80	30.26	-13.58	-27.04	.75197	-.46	-1.73	244	
14	0	-4	1		21.62	21.25	14.45	-15.58	.68873	.37	1.87	313	
14	0	-2	1		25.20	25.88	2.46	25.76	.63196	-.68	-2.88	84	
14	0	0	1		31.67	31.64	31.04	-6.15	.61198	.03	.10	349	
14	0	2	1		16.59	16.74	15.40	6.56	.63228	-.15	-.77	23	
14	0	4	1		41.68	41.46	41.44	1.36	.68931	.22	.60	1	
14	1	-5	1		22.94	22.71	1.69	22.65	.72977	.23	1.13	85	
14	1	-3	1		24.82	24.83	17.49	-17.62	.65768	-.01	-.05	315	
14	1	-1	1		4.21	3.14	1.91	-2.49	.61858	1.08	2.56	308	
14	1	1	1		10.96	10.60	5.12	9.28	.61874	.35	1.59	61	

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
14	1	3	1	20.60	20.56	-9.42	-18.28	.65815	.03	.17	243	
14	1	5	1	29.98	29.83	-24.45	17.10	.73047	.14	.51	145	
14	2	-4	1	47.60	48.36	-48.33	-1.67	.69437	-.76	-1.70	182	
14	2	-2	1	20.59	20.15	-15.13	13.30	.63811	.44	2.23	138	
14	2	0	1	28.11	27.50	-27.09	-4.76	.61833	.61	2.28	190	
14	2	2	1	37.08	38.03	-30.48	22.74	.63843	-.95	-2.73	143	
14	2	4	1	41.07	40.70	-12.90	38.60	.69495	.37	1.02	108	
14	3	-5	1	24.51	24.28	1.61	24.23	.74039	.23	1.07	86	
14	3	-3	1	24.61	24.28	14.10	19.77	.66945	.33	1.52	54	
14	3	-1	1	5.52	5.40	1.17	-5.27	.63107	.12	.34	283	
14	3	1	1	13.04	12.75	1.21	-12.69	.63123	.29	1.39	276	
14	3	3	1	17.57	17.95	.94	-17.92	.66990	-.38	-1.88	274	
14	3	5	1	17.34	17.03	-15.90	6.09	.74108	.31	1.40	159	
14	4	-4	1	14.19	14.02	2.59	-13.78	.71104	.17	.71	281	
14	4	-2	1	14.68	14.10	10.80	9.07	.65621	.58	2.81	40	
14	4	0	1	32.09	31.72	31.26	-5.38	.63699	.37	1.22	351	
14	4	2	1	10.86	10.45	9.95	3.18	.65652	.41	1.67	17	
14	4	4	1	45.98	45.63	43.25	-14.53	.71161	.35	.93	342	
14	5	-3	1	26.63	26.43	15.78	-21.20	.69238	.21	.89	307	
14	5	-1	1	11.32	11.28	-.91	-11.24	.65535	.04	.17	266	
14	5	1	1	10.25	10.59	8.64	-6.12	.65550	-.34	-1.32	325	
14	5	3	1	25.55	25.71	-14.08	-21.51	.69282	-.17	-.70	237	
14	6	-4	1	27.15	26.64	-25.88	6.31	.73798	.52	2.09	166	
14	6	-2	1	27.83	27.64	-26.18	8.86	.68530	.19	.74	161	
14	6	0	1	32.42	31.56	-31.03	5.74	.66693	.86	2.71	169	
14	6	2	1	12.40	12.83	-10.71	-7.07	.68560	-.43	-1.80	214	
14	6	4	1	15.59	15.50	-7.64	13.49	.73852	.08	.37	119	
14	7	-3	1	34.92	34.71	11.76	32.66	.72542	.22	.64	70	
14	7	-1	1	17.82	17.63	16.26	-6.83	.69016	.19	.89	338	
14	7	1	1	19.63	19.58	6.33	-18.53	.69031	.05	.25	289	
14	7	3	1	8.09	7.90	-7.83	1.12	.72584	.18	.59	171	
14	8	-2	1	25.62	25.21	21.98	-12.34	.72408	.41	1.69	331	
14	8	0	1	27.25	27.09	25.60	8.87	.70671	.16	.61	19	
14	8	2	1	21.28	20.86	5.73	20.05	.72436	.42	2.02	74	
14	9	-1	1	10.59	10.52	1.08	-10.46	.73402	.07	.27	276	
14	9	1	1	17.25	16.81	-4.74	-16.13	.73416	.44	1.97	254	
14	10	0	1	39.04	39.19	-31.91	22.76	.75479	-.16	-.46	144	
15	1	-3	1	21.22	20.62	-12.78	16.19	.69853	.60	2.94	128	
15	1	-1	1	23.27	23.45	-18.37	14.57	.66185	-.18	-.76	141	
15	1	1	1	43.48	42.85	26.40	33.75	.66202	.63	1.46	51	
15	1	3	1	15.60	15.78	-7.09	14.09	.69899	-.18	-.82	116	
15	2	-4	1	15.46	15.45	-12.14	-9.56	.73317	.00	.02	219	
15	2	-2	1	8.89	9.04	-9.02	.62	.68014	-.15	-.55	176	
15	2	0	1	4.83	3.92	-2.59	2.95	.66162	.91	2.19	131	
15	2	2	1	15.71	15.76	-12.21	-9.97	.68046	-.05	-.24	220	
15	2	4	1	7.09	7.56	5.87	4.76	.73376	-.47	-1.33	39	
15	3	-3	1	38.46	37.96	9.41	-36.78	.70962	.50	1.32	285	
15	3	-1	1	28.07	28.15	-16.42	-22.87	.67354	-.08	-.30	235	
15	3	1	1	27.84	27.88	-19.55	-19.88	.67370	-.04	-.16	226	
15	3	3	1	20.53	20.95	16.23	-13.25	.71008	-.42	-2.06	321	
15	4	-4	1	23.60	23.20	-23.19	-.68	.74897	.40	1.83	182	
15	4	-2	1	10.77	11.45	7.14	8.95	.69714	-.68	-2.61	51	
15	4	0	1	11.62	11.77	5.22	-10.55	.67909	-.16	-.65	297	
15	4	2	1	8.89	8.31	-5.57	6.17	.69745	.58	2.01	132	
15	4	4	1	13.86	14.26	12.80	6.28	.74955	-.40	-1.61	26	
15	5	-3	1	8.49	7.96	.70	7.93	.73129	.53	1.66	84	

FC

H	K	L	GRP	FO	FC	A	B	SINTH/LM	DF	W*DF	ANGLE CALC	ANGLE STAT
15	5	-1	1	33.27	33.64	-33.24	5.19	.69634	-.37	-1.13	171	
15	5	1	1	48.54	48.55	12.01	47.04	.69650	-.01	-.01	75	
15	5	3	1	13.46	13.55	5.88	12.20	.73173	-.09	-.37	64	
15	6	-2	1	13.84	13.89	-1.73	13.78	.72460	-.05	-.21	97	
15	6	0	1	14.22	14.39	11.20	9.03	.70725	-.17	-.73	38	
15	6	2	1	18.74	19.56	-17.52	-8.70	.72490	-.82	-3.79	207	
15	7	-1	1	16.10	15.46	-13.61	-7.33	.72920	.65	2.86	209	
15	7	1	1	5.86	5.76	5.02	-2.83	.72935	.09	.23	331	
15	8	0	1	19.46	20.35	16.58	-11.79	.74488	-.89	-4.00	325	
16	0	-2	1	55.49	56.04	27.19	-49.00	.71694	-.55	-1.19	300	
16	0	0	1	38.75	39.67	-12.70	37.58	.69941	-.91	-2.45	108	
16	0	2	1	50.69	50.70	36.77	34.91	.71726	-.01	-.03	43	
16	1	-3	1	33.16	32.65	-7.63	31.74	.73970	.51	1.68	103	
16	1	-1	1	25.03	24.73	24.63	2.22	.70518	.30	1.31	5	
16	1	1	1	34.83	35.53	7.88	-34.65	.70534	-.70	-2.13	283	
16	1	3	1	15.70	15.71	-15.70	-.45	.74017	-.01	-.05	182	
16	2	-2	1	60.96	59.94	-59.72	-5.17	.72236	1.02	1.59	185	
16	2	0	1	37.98	38.11	-34.12	16.98	.70497	-.12	-.38	153	
16	2	2	1	15.25	14.99	14.99	.53	.72268	.26	1.12	2	
16	3	-3	1	13.58	13.29	-9.70	9.08	.75018	.29	1.18	136	
16	3	-1	1	34.89	34.81	34.24	6.29	.71616	.08	.24	10	
16	3	1	1	24.93	24.81	6.77	-23.87	.71633	.12	.53	286	
16	3	3	1	31.71	32.21	-32.20	1.05	.75064	-.50	-1.77	178	
16	4	-2	1	33.86	33.59	16.77	-29.10	.73840	.27	.89	300	
16	4	0	1	35.00	34.75	-12.53	32.41	.72139	.25	.83	111	
16	4	2	1	44.62	44.94	30.71	32.80	.73871	-.32	-.83	46	
16	5	-1	1	13.32	13.06	11.75	5.69	.73764	.26	1.05	25	
16	5	1	1	16.76	16.47	-4.94	-15.71	.73780	.29	1.31	253	
16	6	0	1	31.78	31.39	-30.60	6.96	.74796	.40	1.41	167	
17	1	-1	1	8.06	7.96	5.68	5.58	.74855	.10	.29	44	
17	1	1	1	16.77	16.14	.03	16.14	.74871	.63	2.75	89	

REFLECTION STATISTICS

NUMBER OF ATOMS IN THE ASYMMETRIC UNIT	20
NUMBER OF REFLECTIONS	1487
NUMBER OF OBSERVED REFLECTIONS	1477
NUMBER OF LESS-THAN REFLECTIONS	10
NUMBER OF REFLECTIONS IGNORED	0
REFLECTIONS WHERE FO/FC LIES OUTSIDE THE 0.1 TO 10.0 RANGE	0
OVERALL LINEAR SCALING RATIO	.9997
SLOPE OF LN(FO/FC) VS (SIN(THETA)/LAMBDA)**2	.0276

SCALE GROUP	NUMBER OF REFLECTIONS	OLD F(RELATIVE) SCALE FACTORS	NEW F(RELATIVE) SCALE FACTORS	R-VALUES
1	1487	.1728	.1727	.01675

```
****************************
*                          *
*  R(OVERALL) =   .01675   *
*                          *
****************************
```

'REDICTED R VALUE OF .01621 IF OVERALL LEASTSQUARES SCALE OF

```
FC COMPLETED

INTERCHANGED  NFILEA =   9  NFILEB =   8.

   TIME        ELAPSED TIME   DATE
  1.37 MIN        .67 MIN   02/21/78

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                ***************STORE REQUIREMENTS IN WORDS***************
CURRENT  PREVIOUS  CURRENT SIZE   REQUIRED SIZE  MAXIMUM SIZE OF    TOTAL CORE CURRENTLY   LARGEST AMOUNT
PROGRAM  PROGRAM   OF DATA ARRAY  OF DATA ARRAY  DATA ARRAY SO FAR       AVAILABLE        CORE USED SO FAR
FC       FC          2000            518              518             047700               051524

...................................................................................................................
**FINISH X-RAY RUN***FINISH X-RAY RUN***FINISH X-RAY RUN***FINISH X-RAY RUN***FINISH X-RAY RUN***FINISH X-RAY RUN*
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11.09.23. 02/21/78 WANHICQ  7RR68Z00 40  PM

***********         WANHICQ  //// END OF LIST ////
***********         WANHICQ  //// END OF LIST ////
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