

Painite, $\text{CaZrB}[\text{Al}_6\text{O}_{18}]$: Its crystal structure and relation to jeremejevite, $\text{B}_3[\text{Al}_6(\text{OH})_3\text{O}_{15}]$, and fluoroborite, $\text{B}_3[\text{Mg}_3(\text{F}, \text{OH})_3\text{O}_9]$

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Abstract

Painite— $\text{CaZrB}[\text{Al}_6\text{O}_{18}]$, hexagonal $P6_3$, $a = 8.715(2)$, $c = 8.472(2)\text{\AA}$, $Z = 2$ —possesses a rigid and dense $[\text{Al}_6\text{O}_{18}]^{6-}$ octahedral framework, topologically identical to those found in jeremejevite, $\text{B}_3[\text{Al}_6(\text{OH})_3\text{O}_{15}]$ and fluoroborite, $\text{B}_3[\text{Mg}_3(\text{F}, \text{OH})_3\text{O}_9]$. $R = 0.071$ for 1618 independent reflections.

The octahedral framework is linked to $[\text{BO}_3]^{4-}$ triangles and $[\text{ZrO}_6]^{4-}$ trigonal prisms at $\frac{1}{3}z$ and a large pipe at $0.0z$ is clogged with compressed $[\text{CaO}_6]^{10-}$ octahedra. Average interatomic distances are Ca-O = 2.398, Zr-O = 2.126, B-O = 1.380, Al(1)-O = 1.915, Al(2)-O = 1.918, and Al(3)-O = 1.914\AA.

The octahedral framework in painite, resistant to attack by acids and bases, suggests a highly refractory phase and the possibility of other equally resistant compounds, hypothetical examples being $\text{NaNb}^{5+}\text{B}[\text{Al}_6\text{O}_{18}]$ and $\text{U}^{6+}\text{B}[\text{Al}_6\text{O}_{18}]$. In the latter, the pipe would be free from obstructions.

Introduction

Painite is a curious mineral species, first reported by Claringbull, Hey and Payne (1957) from the ruby mines of Mogok, Burma. It was found as a garnet-red 1.7 gram single hexagonal crystal of hardness 8. They proposed a formula $\text{Ca}_4\text{SiBAl}_{20}\text{O}_{38}$, the slight imbalance in charge due either to non-integral oxygen or total cations.

We continue to express interest in dense oxide structures, especially those of the aluminates. In addition, a structural relationship was suggested in the crystal cell data for jeremejevite, $\text{Al}_6(\text{OH})_3(\text{BO}_3)_3$. Our findings reveal an elegant structure for painite, the aluminate framework of which is related to jeremejevite and to the octahedral framework of fluoroborite, $\text{Mg}_3(\text{F}, \text{OH})_3(\text{BO}_3)_3$. Finally, we demonstrate that the correct formula for painite is $\text{CaZrB}[\text{Al}_6\text{O}_{18}]$.

Experimental

A thin sawn plate of the type crystal (B.M. 1954, 192) from near Ohngaing village, Mogok, upper Burma, was kindly provided by Mr. Peter Embrey of the British Museum of Natural History. The chip selected for structure analysis was a flat fragment, measuring $0.31 \times 0.22 \times 0.10$ mm along a_1 , a_2^* , and c , respectively. Calibrated precession photographs established the cell data in Table I.

Three-dimensional single-crystal X-ray diffraction intensities about the a_2 -rotation axis were collected on a PAIRED semi-automated diffractometer with graphite monochromatized $\text{MoK}\alpha_1$ ($\lambda = 0.70926\text{\AA}$) radiation. With $2\theta_{\text{max}} = 69.5^\circ$, data were gathered through the $k = 0$ - to 11-levels. Other salient details: scan speed $1^\circ/\text{min}$, aperture 2.0° , 20 second background measurements, half-scan range of 2.0° widening to 2.5° at higher levels. Reflection pairs of the type $I(hkl)$ and $I(\bar{h}\bar{k}l)$ were collected. An absorption correction was applied to the crystal using $\mu = 22.8 \text{ cm}^{-1}$; approximating the shape of the chip by selecting seven facets, we employed the Gaussian integration method, described by Burnham (1966). This correction was small since maximum difference in transmission factors was about 5%. Additional corrections were made for Lorentz and polarization effects. Weights applied to the processed reflections included an uncertainty for the ν -angle maximum mis-setting of 0.1° , tilting error of 0.05° , average crystal size error of 0.008 mm, and the counting statistics. Two sets of F_0 were available: those which were based on an average of $F(hkl)$ and $F(\bar{h}\bar{k}l)$ (centrosymmetric case) and separate $F(hkl)$ and $F(\bar{h}\bar{k}l)$ (noncentrosymmetric case).

During the crystal structure analysis, it was necessary to challenge the chemical composition of painite proposed by Claringbull *et al* (1957), and we sub-

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H	K	L	FO	FC	ALPH	H	K	L	FO	FC	ALPH	H	K	L	FO	FC	ALPH
12	0	2	26.1	25.8	187.0	4	0	-4	1.4	4.1	77.5	8	1	-8	15.4	13.7	163.9
12	0	1	8.5	7.8	173.7	4	0	-3	59.0	61.4	0.7	8	1	-7	9.2	8.8	4.1
12	0	0	39.1	33.3	2.3	4	0	-2	38.7	41.6	5.5	8	1	-6	7.1	7.2	28.9
12	0	-1	9.0	7.8	7.1	4	0	-1	37.4	39.4	178.5	8	1	-5	15.2	15.1	180.6
12	0	-2	26.1	25.7	175.9	4	0	0	67.9	68.7	180.1	8	1	-4	5.4	4.8	177.2
11	0	5	7.0	6.0	190.8	4	0	1	37.2	39.4	4.0	8	1	-3	56.1	56.3	1.2
11	0	4	8.8	10.1	202.1	4	0	2	38.7	41.5	-2.7	8	1	-2	34.1	32.3	-0.2
11	0	3	12.9	12.2	2.6	4	0	3	58.3	61.4	181.3	8	1	-1	13.1	14.0	184.9
11	0	2	31.3	28.2	-4.1	4	0	4	3.5	4.1	-74.6	8	1	0	15.2	14.5	1.2
11	0	1	1.4	3.2	188.4	4	0	5	28.4	30.4	-2.7	8	1	1	13.3	14.0	1.6
11	0	0	8.5	7.7	1.0	4	0	6	66.0	71.0	-2.3	8	1	2	34.1	32.4	3.8
11	0	-1	2.9	3.3	16.4	4	0	7	22.3	23.8	183.4	8	1	3	56.0	56.3	180.5
11	0	-2	31.8	28.2	7.5	4	0	8	3.7	3.3	259.7	8	1	4	4.7	4.7	186.8
11	0	-3	12.4	12.2	183.6	4	0	9	32.2	33.0	2.4	8	1	5	15.3	15.2	5.0
11	0	-4	9.0	10.2	160.1	4	0	10	15.9	18.7	-8.3	8	1	6	6.3	7.0	-21.8
11	0	-5	6.1	5.9	2.0	4	0	11	17.2	17.1	178.2	8	1	7	9.1	8.9	185.2
10	0	-7	13.6	12.4	-0.6	4	0	12	24.1	20.8	189.4	8	1	8	15.4	13.6	198.8
10	0	-6	11.5	11.1	7.8	3	0	13	5.1	3.7	1.9	8	1	9	39.5	37.1	-0.1
10	0	-5	6.1	6.5	198.0	3	0	12	61.6	60.3	-0.4	7	1	10	10.8	9.9	205.7
10	0	-4	10.1	10.5	175.8	3	0	11	9.8	8.9	-1.0	7	1	9	36.7	35.8	180.7
10	0	-3	45.8	43.4	1.1	3	0	10	39.3	35.6	182.7	7	1	8	22.6	23.1	-4.0
10	0	-2	24.7	22.9	4.4	3	0	9	11.1	11.8	178.7	7	1	7	3.1	3.6	235.2
10	0	-1	11.1	11.0	176.0	3	0	8	28.5	33.9	-9.2	7	1	6	7.7	9.7	-15.3
10	0	0	2.8	1.6	-10.6	3	0	7	1.5	3.4	181.0	7	1	5	3.2	3.1	-23.4
10	0	1	11.4	11.1	10.5	3	0	6	103.0	104.7	183.8	7	1	4	32.5	32.8	1.5
10	0	2	25.0	22.9	-1.0	3	0	5	11.8	12.0	177.7	7	1	3	62.2	63.1	0.5
10	0	3	45.6	43.4	181.7	3	0	4	85.0	89.6	-3.0	7	1	2	9.6	10.7	183.5
10	0	4	9.8	10.4	184.6	3	0	3	34.1	36.0	-0.3	7	1	1	4.6	4.7	38.3
10	0	5	7.2	6.3	-8.1	3	0	2	29.8	33.0	183.4	7	1	0	10.6	9.0	7.4
10	0	6	12.1	11.1	1.5	3	0	1	5.6	5.3	186.1	7	1	-1	5.0	4.8	140.4
10	0	7	14.2	12.4	186.4	3	0	0	236.2	185.5	0.8	7	1	-2	9.8	10.8	181.4
9	0	9	1.5	0.5	150.2	3	0	-1	4.8	5.3	-6.0	7	1	-3	62.6	63.1	180.4
9	0	8	35.5	34.3	-2.0	3	0	-2	29.9	33.0	178.3	7	1	-4	32.6	32.8	2.9
9	0	7	1.4	0.6	209.1	3	0	-3	34.0	36.0	180.3	7	1	-5	3.5	3.0	202.3
9	0	6	60.3	58.1	183.0	3	0	-4	38.8	39.6	5.2	7	1	-6	7.1	9.4	12.1
9	0	5	1.4	2.7	199.7	3	0	-5	11.4	12.0	2.3	7	1	-7	3.0	3.9	-56.5
9	0	4	53.3	51.6	-2.6	3	0	-6	109.1	104.9	177.7	7	1	-8	22.7	23.1	9.7
9	0	3	2.9	0.2	-43.9	3	0	-7	1.5	3.4	-1.1	7	1	-9	36.5	35.8	0.7
9	0	2	31.3	33.2	184.7	3	0	-8	28.5	34.1	13.6	7	1	-10	11.6	9.9	159.7
9	0	1	1.4	1.4	160.7	3	0	-9	10.9	11.8	1.3	6	1	-11	1.5	3.5	194.6
9	0	0	99.5	93.0	1.1	3	0	-10	39.8	35.8	179.6	6	1	-10	20.9	22.3	13.5
9	0	-1	1.4	1.4	21.7	3	0	-11	8.2	8.9	181.0	6	1	-9	32.4	32.3	0.2
9	0	-2	31.3	33.2	177.5	3	0	-12	62.2	60.2	3.6	6	1	-8	8.6	7.7	160.2
9	0	-3	1.4	0.2	189.9	3	0	-13	4.1	3.7	178.1	6	1	-7	15.2	15.5	184.6
9	0	-4	53.4	51.6	5.7	2	0	-13	13.6	12.8	7.9	6	1	-6	4.9	5.5	25.2
9	0	-5	3.8	2.7	-9.1	2	0	-12	6.5	4.1	129.0	6	1	-5	7.1	7.7	6.7
9	0	-6	61.2	58.2	178.9	2	0	-11	19.7	19.5	182.1	6	1	-4	11.3	11.8	175.5
9	0	-7	1.4	0.6	-31.7	2	0	-10	26.2	29.4	8.4	6	1	-3	51.4	54.0	180.7
9	0	-8	35.3	34.3	5.8	2	0	-9	9.4	9.4	182.8	6	1	-2	37.4	38.9	2.8
9	0	-9	1.4	0.5	18.8	2	0	-8	10.2	9.0	149.0	6	1	-1	13.0	14.3	4.2
8	0	-10	20.4	20.1	5.3	2	0	-7	24.7	27.3	185.1	6	1	0	25.0	24.8	-0.2
8	0	-9	21.5	20.1	3.4	2	0	-6	25.6	30.2	11.4	6	1	1	13.2	14.2	182.0
8	0	-8	13.8	12.4	171.6	2	0	-5	32.7	36.8	0.8	6	1	2	37.3	38.9	-0.1
8	0	-7	20.6	20.6	180.7	2	0	-4	18.9	19.2	165.5	6	1	3	50.8	54.0	1.7
8	0	-6	1.4	4.3	63.9	2	0	-3	48.9	49.2	0.4	6	1	4	11.3	11.6	184.6
8	0	-5	23.5	24.0	1.4	2	0	-2	70.7	71.7	3.0	6	1	5	6.7	7.6	183.7
8	0	-4	14.2	15.6	167.2	2	0	-1	43.9	44.6	3.4	6	1	6	5.1	5.2	-5.6
8	0	-3	29.0	28.8	182.0	2	0	0	7.5	9.2	0.8	6	1	7	15.5	15.5	0.9

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8	0	-2	39.8	39.5	4.9	2	0	1	43.4	44.5	179.1	6	1	8	8.3	7.5	201.1
8	0	-1	26.5	27.9	1.4	2	0	2	69.0	71.7	-1.1	6	1	9	32.2	32.3	183.2
8	0	0	22.8	22.3	0.5	2	0	3	48.2	49.2	-177.6	6	1	10	21.0	22.3	-9.9
8	0	1	26.4	27.9	182.0	2	0	4	18.6	19.0	194.7	6	1	11	1.5	3.4	3.5
8	0	2	39.7	39.5	-1.9	2	0	5	32.6	36.8	182.1	5	1	12	12.0	13.0	-12.2
8	0	3	28.8	28.8	0.9	2	0	6	25.5	30.1	-7.9	5	1	11	10.9	11.0	182.4
8	0	4	15.1	15.5	193.9	2	0	7	24.6	27.2	-1.4	5	1	10	13.3	15.6	-16.3
8	0	5	23.7	24.0	182.4	2	0	8	9.9	8.8	213.3	5	1	9	10.4	9.1	12.2
8	0	6	1.4	3.4	-52.2	2	0	9	9.8	9.6	-12.0	5	1	8	16.8	15.2	202.3
8	0	7	21.1	20.6	3.4	2	0	10	26.0	29.6	-5.2	5	1	7	27.6	28.1	180.3
8	0	8	14.4	12.3	190.8	2	0	11	19.3	19.5	2.5	5	1	6	7.7	7.1	202.2
8	0	9	21.8	20.1	180.2	2	0	12	6.4	4.0	235.9	5	1	5	22.5	23.6	2.1
8	0	10	20.2	20.2	-1.4	2	0	13	13.9	12.7	178.2	5	1	4	5.5	5.1	171.8
7	0	11	1.5	2.2	170.4	1	0	13	19.0	17.0	3.9	5	1	3	8.3	9.8	189.3
7	0	10	14.2	15.9	-7.1	1	0	12	11.3	9.2	205.8	5	1	2	44.0	45.7	4.3
7	0	9	29.5	28.6	2.6	1	0	11	12.1	11.5	183.0	5	1	1	33.4	35.9	0.6
7	0	8	4.7	5.8	-21.2	1	0	10	17.0	20.9	-10.2	5	1	0	41.9	45.5	0.3
7	0	7	7.0	6.4	192.9	1	0	9	18.1	18.9	3.5	5	1	-1	33.9	35.9	182.2
7	0	6	34.6	36.1	-1.5	1	0	8	10.6	9.1	206.6	5	1	-2	44.2	45.5	-1.4
7	0	5	4.2	2.6	-21.4	1	0	7	29.3	31.8	183.1	5	1	-3	8.7	9.7	1.9
7	0	4	3.2	3.0	-67.7	1	0	6	44.5	51.7	-3.9	5	1	-4	6.1	5.3	190.1
7	0	3	47.0	48.4	181.6	1	0	5	22.5	26.2	1.2	5	1	-5	22.1	23.6	181.8
7	0	2	18.1	19.6	-3.8	1	0	4	2.5	4.4	262.0	5	1	-6	7.5	7.9	149.6
7	0	1	3.5	4.4	32.3	1	0	3	19.2	21.9	183.2	5	1	-7	27.5	28.1	3.0
7	0	0	18.7	20.4	180.7	1	0	2	68.0	71.1	-2.1	5	1	-8	16.0	15.3	159.7
7	0	-1	3.9	3.9	167.4	1	0	1	46.1	44.0	2.6	5	1	-9	8.6	8.9	178.2
7	0	-2	18.2	19.7	8.8	1	0	0	30.0	30.0	180.0	5	1	-10	13.3	15.8	21.8
7	0	-3	47.4	48.4	1.1	1	0	-1	46.4	43.9	179.9	5	1	-11	11.6	11.9	4.5
7	0	-4	1.4	2.9	70.8	1	0	-2	68.9	71.1	3.9	5	1	-12	11.4	12.8	12.8
7	0	-5	3.0	3.4	224.0	1	0	-3	18.9	21.9	2.0	4	1	-12	3.9	6.6	40.0
7	0	-6	34.7	35.0	4.8	1	0	-4	2.7	4.5	100.4	4	1	-11	4.3	5.0	-10.5
7	0	-7	6.0	6.3	0.2	1	0	-5	22.3	26.2	182.8	4	1	-10	6.7	5.7	131.5
7	0	-8	4.2	5.6	22.2	1	0	-6	44.7	51.6	6.3	4	1	-9	77.6	74.6	0.9
7	0	-9	29.3	28.5	181.3	1	0	-7	28.9	31.8	0.0	4	1	-8	41.4	44.1	5.9
7	0	-10	14.6	15.9	11.9	1	0	-8	10.6	9.4	154.6	4	1	-7	12.6	12.7	190.0
7	0	-11	1.4	2.6	34.1	1	0	-9	13.3	18.9	181.7	4	1	-6	16.4	19.4	9.5
6	0	-11	1.4	0.5	209.0	1	0	-10	15.8	20.9	14.7	4	1	-5	2.9	2.5	175.3
6	0	-10	31.8	28.0	180.3	1	0	-11	12.3	11.5	4.4	4	1	-4	38.7	42.0	4.1
6	0	-9	15.4	15.8	182.6	1	0	-12	10.8	9.3	156.9	4	1	-3	167.9	148.5	180.4
6	0	-8	30.7	33.1	9.8	1	0	-13	18.3	17.0	180.8	4	1	-2	19.9	21.5	178.2
6	0	-7	7.4	7.0	182.9	0	0	-12	176.6	117.3	3.5	4	1	-1	7.2	8.1	12.0
6	0	-6	88.9	84.6	178.4	0	0	-10	29.2	26.1	175.3	4	1	0	14.1	11.9	5.9
6	0	-5	3.6	3.9	2.8	0	0	-8	38.2	44.6	10.3	4	1	1	7.5	8.1	168.7
6	0	-4	63.3	64.3	6.1	0	0	-6	278.5	259.6	179.7	4	1	2	27.1	21.5	184.5
6	0	-3	27.4	29.9	0.8	0	0	-4	73.6	83.2	5.0	4	1	3	158.3	148.4	0.1
6	0	-2	26.9	29.9	177.1	0	0	-2	34.8	38.1	177.0	4	1	4	38.5	42.0	-0.0
6	0	-1	7.6	8.6	0.7	0	0	2	34.8	38.1	177.0	4	1	5	2.4	2.5	5.6
6	0	0	161.0	145.7	0.9	0	0	4	74.0	83.2	-2.6	4	1	6	16.7	19.7	-10.4
6	0	1	8.0	8.6	179.4	0	0	6	282.9	259.3	180.9	4	1	7	12.8	12.7	-8.9
6	0	2	27.0	29.9	195.1	0	0	8	38.7	44.6	-6.9	4	1	8	41.4	44.2	-2.4
6	0	3	27.3	29.9	179.2	0	0	10	29.6	26.0	187.8	4	1	9	74.8	74.6	180.0
6	0	4	62.2	64.3	-3.3	0	0	12	128.5	117.5	-1.8	4	1	10	5.3	6.2	236.7
6	0	5	4.2	3.9	177.6	11	1	4	14.1	13.7	185.1	4	1	11	5.4	5.0	192.0
6	0	6	85.2	84.5	183.2	11	1	3	20.2	18.5	182.3	4	1	12	3.3	6.0	-26.6
6	0	7	7.7	7.0	-2.8	11	1	2	31.8	27.1	1.4	3	1	12	11.6	8.7	204.8
6	0	8	30.9	33.1	-5.4	11	1	1	18.5	18.0	2.9	3	1	11	11.3	11.7	-0.9
6	0	9	15.6	15.8	-2.6	11	1	0	32.0	28.6	0.5	3	1	10	17.6	20.7	-8.1
6	0	10	31.7	27.9	182.6	11	1	-1	18.4	18.0	181.5	3	1	9	47.3	48.4	181.3
5	0	11	1.4	0.5	-26.4	11	1	-2	32.1	27.1	2.1	3	1	8	1.4	4.8	-68.7
5	0	12	3.5	2.1	252.2	11	1	-3	19.9	18.5	2.0	3	1	7	28.0	30.1	4.3
5	0	11	15.6	15.0	6.8	11	1	-4	14.4	13.8	176.6	3	1	6	36.0	41.6	-3.9
5	0	10	13.0	15.4	-6.5	10	1	-6	3.7	2.5	33.7	3	1	5	23.6	26.2	177.9
5	0	9	11.8	12.3	181.2	10	1	-5	5.6	5.9	3.0	3	1	4	1.5	3.3	-87.2
5	0	8	12.6	11.0	203.7	10	1	-4	22.2	19.8	1.8	3	1	3	95.3	95.9	0.7
5	0	7	16.1	17.0	-0.2	10	1	-3	23.5	21.4	180.7	3	1	2	35.8	40.5	-0.7
5	0	6	18.1	21.1	-10.3	10	1	-2	4.3	4.5	185.0	3	1	1	41.9	44.8	184.5

4

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5	0	5	23.2	24.6	186.4	10	1	-1	13.6	12.8	4.6	3	1	0	14.6	15.2	180.0
5	0	4	2.5	3.9	248.3	10	1	0	15.5	11.8	5.3	3	1	-1	42.0	44.7	-2.3
5	0	3	16.3	19.0	1.6	10	1	1	14.1	12.9	176.5	3	1	-2	35.9	40.5	3.7
5	0	2	39.6	42.5	-0.4	10	1	2	4.2	4.3	175.0	3	1	-3	98.6	95.9	180.7
5	0	1	23.6	25.4	177.4	10	1	3	23.2	21.4	1.2	3	1	-4	2.1	3.4	90.3
5	0	0	6.3	6.1	2.0	10	1	4	22.4	19.9	4.0	3	1	-5	23.5	26.2	5.5
5	0	-1	23.6	25.6	6.7	10	1	5	5.9	5.9	178.6	3	1	-6	36.2	41.6	6.7
5	0	-2	39.9	42.5	3.4	10	1	6	3.6	3.2	-44.8	3	1	-7	27.9	30.0	178.8
5	0	-3	16.6	19.1	183.1	9	1	8	7.9	8.1	-19.9	3	1	-8	4.3	4.6	72.0
5	0	-4	3.6	3.9	115.1	9	1	7	12.7	11.5	-3.0	3	1	-9	47.8	48.4	0.9
5	0	-5	23.1	24.5	-2.2	9	1	6	15.3	15.2	-2.7	3	1	-10	17.4	20.7	12.4
5	0	-6	18.1	21.1	14.4	9	1	5	10.0	9.8	187.1	3	1	-11	11.7	11.8	187.1
5	0	-7	16.1	17.1	185.9	9	1	4	8.0	6.9	-5.0	3	1	-12	11.3	8.9	158.0
5	0	-8	12.0	11.1	158.7	9	1	3	43.0	43.0	2.0	2	1	-13	11.7	10.7	180.8
5	0	-9	12.0	12.4	5.1	9	1	2	10.9	7.8	6.4	2	1	-12	4.5	3.8	123.9
5	0	-10	12.9	15.4	12.4	9	1	1	12.7	12.4	177.4	2	1	-11	14.1	14.3	0.7
5	0	-11	15.6	15.0	179.0	9	1	0	4.0	1.5	186.3	2	1	-10	21.3	24.8	12.2
5	0	-12	3.4	2.2	114.9	9	1	-1	11.9	12.5	8.9	2	1	-9	51.2	52.3	181.9
4	0	-12	24.2	21.1	172.1	9	1	-2	11.2	7.7	4.5	2	1	-8	11.9	11.4	150.6
4	0	-11	17.1	17.1	6.2	9	1	-3	43.2	43.0	180.8	2	1	-7	18.3	20.4	1.7
4	0	-10	15.2	18.7	13.0	9	1	-4	7.3	6.8	4.5	2	1	-6	24.6	29.3	11.1
4	0	-9	32.1	33.0	180.9	9	1	-5	9.9	9.8	0.0	2	1	-5	22.7	25.4	179.7
4	0	-8	2.8	3.3	105.1	9	1	-6	15.4	15.2	8.7	2	1	-4	11.5	11.3	168.4
4	0	-7	22.1	23.8	0.6	9	1	-7	12.2	11.6	189.4	2	1	-3	132.2	121.8	0.9
4	0	-6	47.8	70.9	4.1	9	1	-8	7.6	7.8	19.7	2	1	-2	62.1	64.6	1.0
4	0	-5	20.2	30.5	185.7	8	1	-9	39.2	37.2	182.3	2	1	-1	26.5	29.7	183.1

H	K	L	FO	FC	ALPH	H	K	L	FO	FC	ALPH	H	K	L	FO	FC	ALPH
2	1	0	2.5	3.3	2.8	4	2	9	16.5	18.1	-2.9	7	3	5	13.8	13.9	-6.4
2	1	1	26.4	29.6	0.5	4	2	8	5.8	6.1	-29.2	7	3	6	35.2	34.9	-1.6
2	1	2	60.8	64.6	1.1	4	2	7	34.8	35.3	0.8	7	3	7	16.6	16.1	188.6
2	1	3	125.8	121.8	180.1	4	2	6	66.0	69.2	-2.2	7	3	8	5.0	4.8	-34.9
2	1	4	11.7	11.2	192.0	4	2	5	36.0	37.5	182.6	7	3	9	32.3	29.5	1.4
2	1	5	22.8	25.5	4.2	4	2	4	10.9	12.7	-14.6	6	3	10	35.1	29.8	179.9
2	1	6	24.5	29.3	-7.6	4	2	3	39.8	43.7	178.9	6	3	9	6.3	7.0	173.9
2	1	7	18.6	20.4	183.1	4	2	2	19.1	20.3	-3.7	6	3	8	37.3	37.0	-2.5
2	1	8	11.9	11.2	211.3	4	2	1	48.5	50.8	180.2	6	3	7	2.7	2.4	188.4
2	1	9	50.6	52.3	0.0	4	2	0	61.2	66.0	180.2	6	3	6	52.2	50.2	184.8
2	1	10	21.3	24.9	-8.4	4	2	-1	48.8	50.8	2.1	6	3	5	3.1	2.4	-27.8
2	1	11	14.5	14.4	185.0	4	2	-2	19.3	20.4	9.1	6	3	4	63.7	62.1	-3.8
2	1	12	4.3	3.7	241.1	4	2	-3	39.9	43.7	-0.6	6	3	3	8.3	10.0	-2.2
2	1	13	11.9	10.7	6.5	4	2	-4	11.1	12.6	15.1	6	3	2	36.8	38.3	185.3
1	1	12	11.8	10.6	167.5	4	2	-5	36.0	37.5	0.4	6	3	1	2.8	3.0	19.9
1	1	12	4.6	3.2	251.1	4	2	-6	67.3	69.1	4.0	6	3	0	95.1	88.0	1.3
1	1	11	10.3	10.4	193.7	4	2	-7	34.7	35.4	182.0	6	3	-1	2.5	3.0	159.4
1	1	10	15.7	13.9	202.9	4	2	-8	5.9	5.9	30.5	6	3	-2	36.7	38.3	176.6
1	1	9	48.0	49.7	182.5	4	2	-9	17.0	18.0	179.1	6	3	-3	8.5	10.0	181.7
1	1	8	49.5	55.0	-2.2	4	2	-10	8.1	11.0	20.3	6	3	-4	64.5	62.1	6.5
1	1	7	13.2	14.2	-12.6	4	2	-11	18.8	17.9	181.4	6	3	-5	1.4	2.3	206.8
1	1	6	37.6	45.7	-5.9	4	2	-12	26.1	22.6	174.4	6	3	-6	52.8	50.3	177.6
1	1	5	10.5	11.1	12.1	3	2	-12	10.5	8.2	161.4	6	3	-7	2.7	2.4	-9.0
1	1	4	67.5	74.9	-1.5	3	2	-11	23.7	22.9	1.0	6	3	-8	37.7	37.0	6.2
1	1	3	75.6	81.0	1.3	3	2	-10	16.8	19.0	10.1	6	3	-9	6.5	7.0	5.5
1	1	2	42.1	43.6	184.4	3	2	-9	3.8	9.6	-0.4	6	3	-10	7.1	30.0	182.7
1	1	1	4.2	4.4	163.3	3	2	-8	10.6	8.9	160.9	5	3	-11	12.5	11.9	182.0
1	1	0	21.6	16.9	175.7	3	2	-7	37.6	39.0	2.5	5	3	-10	20.1	20.7	8.1
1	1	-1	4.9	4.4	17.2	3	2	-6	35.4	39.6	7.4	5	3	-9	19.1	18.8	2.6
1	1	-2	42.5	43.6	176.9	3	2	-5	44.1	46.3	180.1	5	3	-8	25.9	24.1	172.2
1	1	-3	77.1	80.9	179.7	3	2	-4	5.2	6.6	130.6	5	3	-7	14.6	15.3	179.1
1	1	-4	69.2	74.9	3.9	3	2	-3	26.6	29.7	179.4	5	3	-6	9.2	9.0	28.3
1	1	-5	10.6	11.1	168.5	3	2	-2	44.5	47.8	5.7	5	3	-5	17.5	19.1	2.4
1	1	-6	37.9	45.4	5.6	3	2	-1	62.4	63.0	181.9	5	3	-4	19.4	19.9	173.3
1	1	-7	13.3	14.2	193.4	3	2	0	17.3	18.4	179.9	5	3	-3	26.6	28.5	181.8
1	1	-8	49.7	54.9	5.2	3	2	1	62.2	63.0	-0.1	5	3	-2	55.5	54.9	2.1
1	1	-9	48.0	49.7	-1.0	3	2	2	44.3	47.8	-3.1	5	3	-1	18.9	21.0	0.4
1	1	-10	15.5	13.8	161.3	3	2	3	26.5	29.8	-2.1	5	3	0	16.0	17.2	1.1
1	1	-11	10.3	10.4	-12.5	3	2	4	5.1	6.4	231.1	5	3	1	18.9	21.1	184.2
1	1	-12	4.2	4.8	108.6	3	2	5	43.8	46.3	2.4	5	3	2	54.9	54.9	0.3
10	2	5	19.6	17.2	181.9	3	2	6	35.2	39.6	-4.7	5	3	3	26.7	28.5	1.4
10	2	4	9.7	7.8	-0.4	3	2	7	37.6	38.9	180.1	5	3	4	19.3	19.8	187.6
10	2	3	16.7	15.6	-1.1	3	2	8	10.6	8.7	200.8	5	3	5	17.8	19.1	182.5
10	2	2	6.4	4.4	15.7	3	2	9	9.3	9.7	173.1	5	3	6	8.3	8.8	-21.6
10	2	1	17.8	16.0	186.9	3	2	10	16.4	19.1	-5.4	5	3	7	14.4	15.4	6.7
10	2	0	21.3	23.2	180.7	3	2	11	23.6	22.9	183.1	5	3	8	26.3	23.9	189.2
10	2	-1	17.2	15.9	-1.0	2	2	12	11.3	8.0	201.1	5	3	9	19.0	18.8	181.5
10	2	-2	5.6	4.2	1.9	2	2	12	12.0	14.4	-15.1	5	3	10	20.1	20.8	-4.1
10	2	-3	17.1	15.6	184.4	2	2	11	3.5	4.0	23.7	5	3	11	12.6	11.9	4.5
10	2	-4	10.0	7.7	-0.9	2	2	10	13.6	12.9	210.6	4	3	11	1.5	1.1	180.1
10	2	-5	19.4	17.2	3.6	2	2	9	66.5	67.8	0.8	4	3	10	14.5	16.3	-8.1
9	2	-7	21.2	19.2	6.6	2	2	8	38.2	42.3	-1.7	4	3	9	24.7	24.4	0.8
9	2	-6	36.8	33.0	4.7	2	2	7	7.4	7.5	157.3	4	3	8	1.4	3.6	-51.3
9	2	-5	29.6	27.3	178.5	2	2	6	5.1	8.4	-20.7	4	3	7	15.1	16.4	190.8
9	2	-4	6.7	8.0	157.7	2	2	5	2.9	4.0	194.2	4	3	6	65.0	67.2	-1.8
9	2	-3	13.2	14.0	178.0	2	2	4	51.4	57.1	0.3	4	3	5	6.0	6.5	-7.7
9	2	-2	22.3	20.8	9.4	2	2	3	146.4	141.0	180.3	4	3	4	1.4	2.8	-67.7
						2	2	2	21.4	23.0	187.1	4	3	3	35.9	38.3	181.0

9	2	-1	30.4	28.5	185.4	2	2	1	2.7	1.8	-83.6	4	3	2	25.1	26.1	-1.9
9	2	0	24.9	24.6	180.5	2	2	0	41.7	46.2	1.5	4	3	1	12.9	14.2	14.4
9	2	1	30.3	28.4	-2.0	2	2	-1	1.5	1.9	264.4	4	3	0	59.1	63.2	180.2
9	2	2	22.4	20.7	-5.4	2	2	-2	21.3	23.0	175.5	4	3	-1	13.1	13.9	172.5
9	2	3	13.9	14.0	-1.5	2	2	-3	156.9	141.0	0.2	4	3	-2	25.1	26.1	5.9
9	2	4	6.3	7.9	203.5	2	2	-4	52.2	57.0	2.8	4	3	-3	36.2	38.3	2.0
9	2	5	29.8	27.4	5.1	2	2	-5	2.9	4.0	-13.1	4	3	-4	2.4	2.8	71.1
9	2	6	36.5	33.1	-1.8	2	2	-6	5.9	8.1	19.4	4	3	-5	6.1	6.8	201.1
9	2	7	21.5	19.1	177.7	2	2	-7	7.5	7.5	24.3	4	3	-6	66.7	67.1	3.6
8	2	8	24.4	23.5	-2.5	2	2	-8	38.5	42.2	5.6	4	3	-7	15.3	16.2	-5.3
8	2	7	5.2	4.7	148.3	2	2	-9	67.9	67.8	180.3	4	3	-8	4.3	3.5	54.7
8	2	6	20.6	19.5	-7.3	2	2	-10	13.2	12.7	153.9	4	3	-9	24.6	24.4	183.2
8	2	5	3.3	4.1	153.7	2	2	-11	4.3	4.0	158.7	4	3	-10	14.6	16.3	13.1
8	2	4	28.6	27.6	0.9	2	2	-12	12.5	14.6	21.3	4	3	-11	1.4	1.7	50.4
8	2	3	26.0	27.0	180.6	1	2	-13	8.7	7.5	3.9	3	3	-12	62.5	59.6	4.1
8	2	2	11.6	13.1	184.1	1	2	-12	13.6	11.7	164.7	3	3	-11	3.0	1.4	5.2
8	2	1	1.4	3.1	-66.1	1	2	-11	28.9	27.9	179.9	3	3	-10	24.6	21.1	182.5
8	2	0	7.5	7.3	172.1	1	2	-10	12.0	15.4	18.2	3	3	-9	18.4	18.3	182.4
8	2	-1	4.6	3.3	249.0	1	2	-9	28.5	30.0	3.4	3	3	-8	33.3	36.4	8.6
8	2	-2	11.7	13.1	180.2	1	2	-8	3.7	3.8	105.1	3	3	-7	6.4	6.0	-13.4
8	2	-3	26.2	27.0	0.9	1	2	-7	19.1	20.6	183.1	3	3	-6	110.8	104.9	178.6
8	2	-4	28.4	27.6	4.0	1	2	-6	48.7	54.9	5.9	3	3	-5	5.2	4.5	187.5
8	2	-5	5.4	4.0	23.7	1	2	-5	42.7	46.2	-0.4	3	3	-4	56.8	58.9	8.5
8	2	-6	20.3	19.3	5.9	1	2	-4	9.6	12.5	19.1	3	3	-3	33.9	35.9	0.8
8	2	-7	5.1	4.8	35.2	1	2	-3	75.5	75.9	181.2	3	3	-2	23.5	25.8	173.4
8	2	-8	24.5	23.5	7.8	1	2	-2	36.9	41.8	5.5	3	3	-1	8.4	8.9	170.4
7	2	-9	12.5	12.2	176.6	1	2	-1	38.5	41.3	2.8	3	3	0	226.3	184.1	0.7
7	2	-8	1.4	4.2	22.0	1	2	0	35.8	37.3	180.1	3	3	1	7.9	8.9	9.6
7	2	-7	18.8	18.2	182.9	1	2	1	38.2	41.2	180.0	3	3	2	23.5	25.8	189.1
7	2	-6	30.4	31.4	5.0	1	2	2	36.6	41.8	-2.5	3	3	3	33.5	35.9	179.2
7	2	-5	29.7	28.9	1.3	1	2	3	73.0	75.9	-0.0	3	3	4	56.0	58.7	-5.4
7	2	-4	8.8	9.4	166.9	1	2	4	7.7	12.7	-18.6	3	3	5	5.4	4.6	-7.6
7	2	-3	20.9	21.5	-1.9	1	2	5	42.5	46.2	182.8	3	3	6	105.0	104.7	182.7
7	2	-2	23.3	22.7	6.6	1	2	6	47.8	54.9	-3.7	3	3	7	6.5	6.0	193.4
7	2	-1	29.7	29.3	2.1	1	2	7	19.1	20.8	1.8	3	3	8	33.2	36.4	-4.6
7	2	0	15.0	16.5	181.0	1	2	8	4.7	3.8	259.5	3	3	9	18.6	18.3	-2.3
7	2	1	29.8	29.3	181.5	1	2	9	28.4	29.9	179.2	3	3	10	24.7	20.8	181.3
7	2	2	23.0	22.6	-2.5	1	2	10	11.8	15.3	-12.1	3	3	11	1.4	1.4	174.4
7	2	3	20.8	21.5	178.9	1	2	11	28.8	27.9	3.4	3	3	12	61.8	59.7	-1.1
7	2	4	8.6	9.3	193.5	1	2	12	14.4	11.5	197.6	2	3	12	13.8	15.4	-12.8
7	2	5	29.8	29.9	182.4	1	2	13	8.5	7.5	186.7	2	3	11	17.9	17.7	2.8
7	2	6	30.7	31.5	-1.2	10	3	3	31.0	29.4	181.8	2	3	10	23.4	25.9	-8.4
7	2	7	19.1	18.2	2.2	10	3	2	3.3	4.7	7.0	2	3	9	20.6	20.9	182.5
7	2	8	1.4	4.4	-21.3	10	3	1	9.0	8.3	12.1	2	3	8	29.4	28.1	189.5
7	2	9	13.0	12.2	-1.2	10	3	0	12.8	14.0	181.1	2	3	7	23.7	25.3	0.4
6	2	10	16.7	17.4	-3.8	10	3	-1	8.8	8.2	176.3	2	3	6	10.4	10.6	194.8
6	2	9	1.4	1.2	1.6	10	3	-2	7.6	4.7	8.3	2	3	5	29.7	32.1	182.3
6	2	8	17.3	8.6	188.4	10	3	-3	31.1	29.4	1.8	2	3	4	24.4	24.8	184.2
6	2	7	17.1	17.3	180.1	9	3	-6	38.7	36.0	178.9	2	3	3	33.9	36.6	1.5
6	2	6	30.8	31.8	-3.1	9	3	-5	6.6	5.2	-8.3	2	3	2	78.4	78.9	0.2
6	2	5	32.5	32.8	5.4	9	3	-4	34.8	31.8	10.0	2	3	1	37.1	40.1	180.2
6	2	4	7.6	8.7	209.0	9	3	-3	1.4	0.9	182.6	2	3	0	57.5	60.8	0.3
6	2	3	1.4	1.7	-10.9	9	3	-2	19.6	20.7	173.6	2	3	-1	37.1	40.1	2.4
6	2	2	34.5	34.7	-4.6	9	3	-1	6.1	5.5	10.1	2	3	-2	80.0	78.8	1.5
6	2	1	29.7	30.9	-1.8	9	3	0	65.2	58.9	1.5	2	3	-3	34.1	36.6	181.3
6	2	0	13.8	16.0	180.4	9	3	1	6.1	5.5	170.9	2	3	-4	24.3	24.9	176.3
6	2	-1	29.7	31.0	185.3	9	3	2	19.9	20.8	190.1	2	3	-5	29.7	32.1	0.8
6	2	-2	34.4	34.8	7.6	9	3	3	1.4	0.9	-15.3	2	3	-6	10.2	11.3	158.6
6	2	-3	1.4	1.9	155.5	9	3	4	34.8	31.6	-5.4	2	3	-7	23.9	25.3	183.4
6	2	-4	6.9	8.8	152.0	9	3	5	6.7	5.2	189.7	2	3	-8	29.6	28.3	171.4
6	2	-5	32.4	32.7	177.9	9	3	6	38.6	35.9	183.8	2	3	-9	20.3	20.9	1.7
6	2	-6	30.7	31.7	6.4	8	3	8	17.3	15.0	190.4	2	3	-10	23.6	25.9	12.0
6	2	-7	16.9	17.3	5.3	8	3	7	22.5	21.8	3.7	2	3	-11	17.9	17.7	181.9
6	2	-8	9.8	8.6	172.7	8	3	6	12.5	13.3	188.3	2	3	-12	13.0	15.2	13.4
6	2	-9	3.6	1.5	218.0	8	3	5	20.6	20.4	179.8	1	3	-13	14.0	13.3	180.6
6	2	-10	16.5	17.3	8.3	8	3	4	7.2	8.6	195.1	1	3	-12	17.4	19.8	15.6

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5	2	-11	3.3	2.7	166.1	8	3	3	8.0	8.2	6.1	1	3	-11	18.7	18.4	3.3
5	2	-10	11.6	11.0	156.1	8	3	2	33.6	31.6	0.1	1	3	-10	20.7	23.8	13.6
5	2	-9	38.5	38.2	189.1	8	3	1	25.7	25.7	183.8	1	3	-9	19.6	19.7	183.1
5	2	-8	42.8	43.7	5.2	8	3	0	35.5	34.4	0.5	1	3	-8	9.3	12.1	13.1
5	2	-7	11.9	11.8	16.0	8	3	-1	25.2	25.7	-0.4	1	3	-7	25.1	27.0	-0.5
5	2	-6	22.8	22.2	175.9	8	3	-2	33.7	31.5	3.4	1	3	-6	19.5	20.4	171.9
5	2	-5	1.4	1.1	152.5	8	3	-3	7.3	8.1	183.8	1	3	-5	31.6	34.3	183.1
5	2	-4	43.9	45.9	2.2	8	3	-4	7.7	8.6	167.8	1	3	-4	2.1	2.9	86.4
5	2	-3	67.7	69.1	0.3	8	3	-5	20.4	20.4	4.2	1	3	-3	31.5	34.5	1.8
5	2	-2	27.8	30.2	179.8	8	3	-6	12.6	13.6	168.7	1	3	-2	26.4	30.3	7.8
5	2	-1	8.9	9.3	197.7	8	3	-7	22.8	21.8	179.8	1	3	-1	39.9	43.0	179.2
5	2	0	62.3	62.0	1.1	8	3	-8	16.6	15.1	172.1	1	3	0	139.3	117.6	-0.1
5	2	1	8.7	9.3	-16.7	7	3	-9	32.2	29.5	181.9	1	3	1	39.7	43.1	3.3
5	2	2	28.1	30.2	182.1	7	3	-8	6.0	4.6	35.7	1	3	2	26.4	30.2	-3.9
5	2	3	66.9	69.0	189.7	7	3	-7	16.3	16.0	-3.6	1	3	3	31.4	34.4	181.2
5	2	4	43.6	46.0	1.2	7	3	-6	35.1	34.8	4.7	1	3	4	1.5	2.9	-82.3
5	2	5	1.4	1.1	30.3	7	3	-5	13.6	14.0	191.9	1	3	5	31.3	34.2	-0.1
5	2	6	23.0	22.1	185.2	7	3	-4	4.7	3.9	5.4	1	3	6	19.7	20.0	181.8
5	2	7	11.9	11.8	165.2	7	3	-3	46.8	45.8	1.3	1	3	7	25.1	27.1	184.1
5	2	8	42.7	43.3	-1.9	7	3	-2	14.6	13.2	3.1	1	3	8	9.8	12.4	-12.7
5	2	9	38.3	38.2	1.3	7	3	-1	17.8	18.0	174.2	1	3	9	19.3	19.7	1.4
5	2	10	12.0	11.1	209.0	7	3	0	22.5	24.9	180.6	1	3	10	21.4	23.8	-9.9
5	2	11	3.6	2.7	14.6	7	3	1	17.7	18.2	10.4	1	3	11	19.1	18.4	181.4
4	2	12	26.4	22.4	137.1	7	3	2	14.7	13.3	3.5	1	3	12	17.3	20.3	-16.8
4	2	11	19.3	17.9	3.9	7	3	3	46.6	45.7	181.2	1	3	13	14.6	13.3	5.2
4	2	10	7.9	10.8	-12.5	7	3	4	4.9	4.0	-6.1	9	4	4	3.8	2.6	-33.8

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H	K	L	FD	FC	ALPH	H	K	L	FD	FC	ALPH	H	K	L	FD	FC	ALPH
9	4	3	16.3	15.2	6.4	3	4	-8	5.5	6.9	27.0	4	5	2	23.5	23.2	-2.5
9	4	2	11.0	8.7	-2.9	3	4	-9	23.3	23.6	-0.7	4	5	1	26.5	26.7	179.6
9	4	1	8.4	7.9	169.1	3	4	-10	14.5	16.3	14.2	4	5	0	28.4	29.9	180.5
9	4	0	22.4	22.8	180.7	3	4	-11	3.7	3.5	209.8	4	5	-1	26.5	26.8	4.6
9	4	-1	8.0	8.2	19.0	2	4	-12	7.2	6.5	156.8	4	5	-2	23.5	23.2	6.6
9	4	-2	11.3	8.8	10.5	2	4	-11	11.3	10.9	2.8	4	5	-3	1.4	3.7	198.1
9	4	-3	15.9	15.1	181.3	2	4	-10	12.3	14.8	16.8	4	5	-4	2.9	2.3	114.9
9	4	-4	3.0	2.5	33.3	2	4	-9	32.5	33.3	180.5	4	5	-5	32.2	31.7	-1.2
8	4	-6	3.2	2.0	107.5	2	4	-8	8.9	8.4	147.4	4	5	-6	40.8	40.4	4.2
3	4	-5	21.8	20.6	181.5	2	4	-7	14.2	14.8	6.6	4	5	-7	12.7	12.3	184.9
3	4	-4	9.8	10.3	179.2	2	4	-6	28.3	31.8	8.0	4	5	-8	4.0	2.9	139.8
8	4	-3	12.0	11.5	2.0	2	4	-5	15.1	16.6	181.2	4	5	-9	4.9	4.7	22.2
8	4	-2	34.1	30.7	1.8	2	4	-4	1.5	1.8	75.0	4	5	-10	12.7	13.7	14.8
8	4	-1	28.8	27.7	182.6	2	4	-3	56.9	59.3	9.6	3	5	-11	20.4	19.0	0.0
8	4	0	17.7	16.0	0.6	2	4	-2	34.6	37.5	1.6	3	5	-10	18.3	19.5	10.8
8	4	1	29.0	27.7	0.4	2	4	-1	16.6	19.2	185.4	3	5	-9	10.5	9.8	185.5
8	4	2	33.8	30.8	2.3	2	4	0	11.9	11.1	179.4	3	5	-8	11.8	10.3	170.3
8	4	3	13.0	11.5	185.5	2	4	1	16.8	19.1	-0.4	3	5	-7	17.8	18.3	3.4
8	4	4	9.7	10.2	182.5	2	4	2	34.6	37.5	1.6	3	5	-6	6.3	6.3	148.9
8	4	5	21.8	20.6	2.4	2	4	3	55.9	59.3	181.4	3	5	-5	28.5	29.4	179.7
8	4	6	1.4	1.1	247.1	2	4	4	2.1	1.9	-71.2	3	5	-4	11.4	11.8	166.2
7	4	8	16.2	15.1	-8.4	2	4	5	15.4	16.7	4.1	3	5	-3	13.7	13.1	3.7
7	4	7	10.6	9.4	-12.1	2	4	6	28.0	31.9	-5.0	3	5	-2	38.7	39.2	5.2
7	4	6	27.8	26.9	182.4	2	4	7	14.1	14.7	179.5	3	5	-1	28.4	29.8	183.4
7	4	5	5.6	5.3	187.5	2	4	8	9.2	8.3	215.1	3	5	0	33.4	36.2	0.1
7	4	4	14.7	14.1	12.0	2	4	9	32.4	33.3	2.7	3	5	1	28.1	29.7	0.1
7	4	3	31.5	31.2	0.9	2	4	10	12.7	14.7	-11.0	3	5	2	38.6	39.2	-2.3
7	4	2	1.4	1.1	115.9	2	4	11	11.0	10.9	183.8	3	5	3	13.3	13.1	182.0
7	4	1	9.2	9.5	169.5	2	4	12	8.8	6.3	205.5	3	5	4	10.9	11.6	194.8
7	4	0	51.9	49.3	1.3	1	4	12	3.7	3.5	-53.7	3	5	5	28.6	29.4	3.8
7	4	-1	8.9	9.5	11.8	1	4	11	7.5	6.3	193.8	3	5	6	5.7	5.4	198.2
7	4	-2	3.3	1.9	254.8	1	4	10	12.1	11.1	208.7	3	5	7	17.8	18.3	181.5
7	4	-3	31.5	31.2	180.6	1	4	9	51.4	52.4	181.2	3	5	8	11.9	10.1	191.6
7	4	-4	15.3	13.8	-3.1	1	4	8	32.2	35.7	-2.2	3	5	9	10.4	9.8	1.2
7	4	-5	3.7	5.3	-5.9	1	4	7	9.8	9.3	-13.0	3	5	10	18.5	19.5	-6.7
7	4	-6	27.9	27.0	179.2	1	4	6	26.4	30.4	-6.3	3	5	11	20.9	19.0	184.5
7	4	-7	10.7	9.4	193.8	1	4	5	6.3	6.2	5.0	2	5	11	1.5	2.9	25.6
7	4	-8	19.8	15.2	13.7	1	4	4	43.4	47.8	-0.4	2	5	10	20.3	18.3	195.7
6	4	-9	48.9	44.4	1.0	1	4	3	95.7	100.4	0.5	2	5	9	17.6	17.3	7.0
6	4	-8	10.1	9.9	15.6	1	4	2	14.8	16.8	139.0	2	5	8	37.7	39.3	-3.0
6	4	-7	6.1	6.5	197.3	1	4	1	2.3	1.9	137.6	2	5	7	21.9	21.5	171.5
6	4	-6	33.8	33.7	5.1	1	4	0	9.8	9.1	172.4	2	5	6	19.1	21.6	-9.1
6	4	-5	3.4	0.9	36.5	1	4	-1	2.8	2.0	45.1	2	5	5	5.6	5.2	-1.8
6	4	-4	13.6	12.3	3.8	1	4	-2	15.0	16.7	174.5	2	5	4	51.7	54.1	1.1
6	4	-3	73.0	69.9	187.8	1	4	-3	109.5	100.4	180.2	2	5	3	28.7	30.5	182.8
6	4	-2	6.3	5.0	11.5	1	4	-4	43.8	47.7	4.0	2	5	2	28.7	31.3	181.0
6	4	-1	3.9	3.7	16.8	1	4	-5	6.6	6.2	175.3	2	5	1	18.8	20.1	-6.5
6	4	0	20.5	23.1	180.6	1	4	-6	26.3	30.1	5.7	2	5	0	4.8	3.7	161.5
6	4	1	4.0	3.5	184.5	1	4	-7	9.6	9.3	194.5	2	5	-1	18.7	20.1	187.0
6	4	2	5.8	5.0	5.9	1	4	-8	32.3	35.6	6.5	2	5	-2	28.9	31.4	180.8
6	4	3	72.3	69.9	1.1	1	4	-9	52.0	52.4	0.1	2	5	-3	28.7	30.4	-0.6
6	4	4	13.2	12.5	-3.8	1	4	-10	11.5	11.0	156.4	2	5	-4	52.6	54.0	1.9
6	4	5	1.4	1.0	218.8	1	4	-11	7.0	6.3	-9.7	2	5	-5	5.0	5.2	182.2
6	4	6	33.8	33.8	-1.9	1	4	-12	2.8	4.7	68.1	2	5	-6	18.8	21.3	8.0
6	4	7	6.1	6.4	1.6	8	5	4	20.9	17.5	-2.4	2	5	-7	21.7	21.5	9.2
6	4	8	10.0	10.1	-15.3	8	5	3	21.1	20.0	180.7	2	5	-8	37.8	39.2	6.7
6	4	9	47.9	44.4	181.6	8	5	2	8.5	9.7	192.4	2	5	-9	17.4	17.2	176.2
5	4	10	25.4	24.9	-5.4	8	5	1	15.5	15.2	-8.4	2	5	-10	20.7	18.4	167.3

5	4	9	6.5	6.2	19.9	8	5	0	22.0	18.1	2.8	2	5	-11	4.0	2.9	155.5
5	4	8	12.2	10.7	200.5	8	5	-1	15.4	15.2	189.6	1	5	-12	12.6	9.7	162.4
5	4	7	15.2	14.3	175.4	8	5	-2	8.9	9.6	173.1	1	5	-11	27.6	25.7	179.1
5	4	6	3.4	1.7	266.9	8	5	-3	21.5	20.0	0.5	1	5	-10	26.7	27.9	5.6
5	4	5	14.8	15.2	6.7	8	5	-4	21.0	17.6	9.0	1	5	-9	20.5	20.4	5.8
5	4	4	18.5	18.0	182.5	7	5	-6	32.0	29.9	3.9	1	5	-8	4.6	3.3	31.3
5	4	3	11.2	9.9	189.4	7	5	-5	33.4	30.8	3.2	1	5	-7	30.0	30.8	181.0
5	4	2	40.8	40.7	2.0	7	5	-4	3.8	3.8	171.3	1	5	-6	35.4	37.2	6.4
5	4	1	17.5	18.1	-3.6	7	5	-3	13.0	13.7	-2.8	1	5	-5	43.7	45.1	-1.0
5	4	0	26.2	26.2	0.4	7	5	-2	20.3	17.6	3.8	1	5	-4	14.0	15.1	160.8
5	4	-1	17.6	18.3	188.5	7	5	-1	36.3	34.1	-0.7	1	5	-3	32.4	33.5	182.6
5	4	-2	40.8	40.6	0.7	7	5	0	20.7	22.4	180.8	1	5	-2	35.3	37.5	7.8
5	4	-3	10.0	9.8	1.4	7	5	1	36.2	34.2	183.7	1	5	-1	48.6	51.0	2.2
5	4	-4	17.9	18.9	178.1	7	5	2	20.1	17.6	0.6	1	5	0	12.9	14.3	180.6
5	4	-5	14.5	15.1	178.9	7	5	3	12.5	13.7	179.6	1	5	1	48.3	51.0	180.1
5	4	-6	2.7	3.0	95.7	7	5	4	2.6	3.8	190.5	1	5	2	35.4	37.4	-4.9
5	4	-7	15.1	15.0	10.2	7	5	5	33.5	30.8	180.1	1	5	3	32.3	33.5	-0.6
5	4	-8	12.1	10.8	161.9	7	5	6	32.2	30.0	-0.5	1	5	4	13.8	14.9	199.5
5	4	-9	5.1	5.9	174.9	6	5	3	1.4	3.4	-25.8	1	5	5	43.3	45.2	183.5
5	4	-10	24.8	24.8	8.5	6	5	7	14.7	14.4	184.6	1	5	6	35.0	37.2	-3.2
4	4	-11	1.5	2.9	210.6	6	5	6	12.1	11.6	-6.9	1	5	7	29.7	30.9	2.3
4	4	-10	15.8	14.3	163.3	6	5	5	19.7	19.1	3.3	1	5	8	3.5	3.5	-29.8
4	4	-9	31.7	30.8	-0.8	6	5	4	5.1	4.1	-48.0	1	5	9	20.9	20.3	177.2
4	4	-8	34.5	35.0	8.1	6	5	3	3.0	3.5	185.2	1	5	10	26.5	28.1	-2.7
4	4	-7	23.0	23.0	185.1	6	5	2	15.2	13.6	-5.9	1	5	11	27.2	25.7	4.7
4	4	-6	8.8	8.6	14.5	6	5	1	20.6	20.0	2.4	1	5	12	12.6	9.6	201.0
4	4	-5	11.2	11.8	4.7	6	5	0	7.5	3.5	-1.7	7	6	4	4.1	2.2	-25.7
4	4	-4	43.9	44.6	1.1	6	5	-1	20.6	20.6	182.2	7	6	3	12.3	10.2	185.9
4	4	-3	52.8	54.1	180.1	6	5	-2	15.0	13.7	12.6	7	6	2	12.1	10.2	1.7
4	4	-2	23.2	24.6	183.3	6	5	-3	3.3	3.6	12.3	7	6	1	14.2	13.8	5.8
4	4	-1	22.5	24.6	2.1	6	5	-4	5.2	3.9	48.2	7	6	0	17.5	19.5	180.7
4	4	0	15.0	12.6	5.3	6	5	-5	19.8	19.1	181.6	7	6	-1	14.4	13.7	179.9
4	4	1	22.7	24.5	178.3	6	5	-6	12.0	11.7	14.4	7	6	-2	12.7	10.3	5.9
4	4	2	23.1	24.5	178.9	6	5	-7	14.8	14.4	1.2	7	6	-3	12.3	10.2	3.4
4	4	3	52.5	54.1	1.1	6	5	-8	1.5	3.2	23.2	7	6	-4	3.8	2.0	21.4
4	4	4	43.6	44.7	2.3	5	5	-9	42.3	39.6	181.0	6	6	-6	25.6	24.5	177.3
4	4	5	10.0	11.8	175.5	5	5	-8	25.8	25.2	7.0	6	6	-5	1.4	3.1	-11.3
4	4	6	8.5	9.0	-17.3	5	5	-7	10.3	9.4	14.8	6	6	-4	41.6	37.9	8.4
4	4	7	23.3	23.1	-4.4	5	5	-6	19.9	19.4	6.6	6	6	-3	1.4	1.7	175.2
4	4	8	34.3	35.0	-4.2	5	5	-5	12.2	12.0	176.4	6	6	-2	22.3	23.0	175.1
4	4	9	31.7	30.8	182.6	5	5	-4	34.2	33.3	4.4	6	6	-1	2.7	0.9	42.7
4	4	10	15.5	14.3	200.6	5	5	-3	65.0	63.8	0.5	6	6	0	51.3	46.3	1.9
4	4	11	1.4	2.9	-30.8	5	5	-2	15.7	16.1	178.2	6	6	1	1.4	0.9	140.7
3	4	11	5.5	3.1	-12.2	5	5	-1	12.8	13.4	190.0	6	6	2	22.2	23.1	188.2
3	4	10	14.2	16.3	-9.3	5	5	0	6.1	6.6	170.8	6	6	3	1.4	1.7	1.6
3	4	9	23.6	23.7	185.6	5	5	1	13.3	13.4	-8.9	6	6	4	41.5	37.8	-4.4
3	4	8	5.0	7.2	-26.0	5	5	2	15.6	16.1	185.2	6	6	5	3.4	3.1	192.4
3	4	7	14.6	15.1	4.4	5	5	3	64.5	63.8	180.3	6	6	6	26.0	24.5	186.8
3	4	6	41.2	44.9	-2.4	5	5	4	34.4	33.3	-0.2	5	6	8	22.3	19.9	188.3
3	4	5	6.7	6.7	169.8	5	5	5	11.7	12.0	4.4	5	6	7	20.8	19.9	-0.5
3	4	4	3.2	3.5	-36.3	5	5	6	20.0	19.6	-8.1	5	6	6	3.4	3.4	229.5
3	4	3	36.5	39.2	2.8	5	5	7	9.7	9.4	167.0	5	6	5	26.8	26.0	182.0
3	4	2	20.1	21.6	-0.7	5	5	8	26.2	25.2	-2.1	5	6	4	18.8	18.6	186.9
3	4	1	12.7	13.5	190.0	5	5	9	41.9	39.6	0.1	5	6	3	12.3	11.7	5.0
3	4	0	25.9	29.8	180.3	4	5	10	12.9	13.6	-9.4	5	6	2	44.9	41.7	0.4
3	4	-1	12.3	13.4	-3.4	4	5	9	3.7	4.5	167.9	5	6	1	27.9	27.5	180.4
3	4	-2	20.3	21.6	5.5	4	5	8	3.5	2.8	223.3	5	6	0	23.4	23.0	0.9
3	4	-3	36.5	39.2	180.7	4	5	7	12.5	12.3	2.9	5	6	-1	27.8	27.6	2.7
3	4	-4	3.1	3.4	38.6	4	5	6	40.1	40.5	-1.3	5	6	-2	45.1	41.7	2.4
3	4	-5	6.0	7.0	21.4	4	5	5	31.9	31.8	184.7	5	6	-3	12.5	11.7	182.2
3	4	-6	41.7	44.9	5.0	4	5	4	2.8	2.3	248.8	5	6	-4	18.8	18.7	174.5
3	4	-7	15.0	15.1	181.3	4	5	3	3.3	3.5	-3.3	5	6	-5	26.6	26.0	1.2

PAINITE

SHEET NO. 2 PART 2

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H	K	L	FD	FC	ALPH	H	K	L	FD	FC	ALPH	H	K	L	FD	FC	ALPH
5	6	-6	4.1	4.0	126.7	4	7	-3	26.4	27.3	180.7	2	8	-6	8.3	8.3	170.4
5	6	-7	21.0	19.9	184.4	4	7	-4	30.3	28.7	0.3	2	8	-7	7.5	8.0	27.7
5	6	-8	22.3	20.0	173.8	4	7	-5	1.4	1.9	-28.6	2	8	-8	23.2	21.8	7.4
4	6	-9	26.3	24.3	183.1	4	7	-6	3.2	3.3	29.5	1	8	-9	17.6	17.8	180.2
4	6	-8	1.4	1.9	63.7	4	7	-7	2.6	3.6	219.7	1	8	-8	8.3	8.9	13.1
4	6	-7	21.8	21.5	-3.7	4	7	-8	25.7	24.3	9.4	1	8	-7	33.6	32.5	181.9
4	6	-6	23.9	24.0	5.6	3	7	-9	41.1	38.1	0.9	1	8	-6	40.9	40.8	4.8
4	6	-5	22.7	22.9	186.4	3	7	-8	6.3	4.8	18.8	1	8	-5	43.1	42.3	0.8
4	6	-4	5.4	6.8	166.6	3	7	-7	18.3	17.2	178.0	1	8	-4	13.1	12.2	11.6
4	6	-3	36.0	35.8	1.8	3	7	-6	43.8	43.6	3.8	1	8	-3	29.5	31.3	-0.5
4	6	-2	22.1	21.7	5.4	3	7	-5	5.4	5.8	25.2	1	8	-2	7.0	6.6	21.8
4	6	-1	26.5	27.3	176.4	3	7	-4	7.1	6.0	24.1	1	8	-1	47.1	47.0	1.6
4	6	0	8.3	10.2	181.4	3	7	-3	60.0	59.2	180.9	1	8	0	28.8	31.6	180.5
4	6	1	26.3	27.4	7.0	3	7	-2	11.7	11.8	12.8	1	8	1	46.9	47.0	180.7
4	6	2	22.2	21.7	-1.2	3	7	-1	13.7	13.7	-5.3	1	8	2	6.8	6.3	-7.9
4	6	3	36.1	35.8	180.8	3	7	0	32.8	36.1	180.4	1	8	3	29.6	31.3	178.9
4	6	4	6.1	6.7	194.4	3	7	1	13.7	13.9	190.7	1	8	4	13.1	12.3	-11.7
4	6	5	22.7	22.8	-2.6	3	7	2	11.7	11.6	-5.7	1	8	5	42.3	42.2	181.8
4	6	6	24.2	24.0	-1.1	3	7	3	59.8	59.2	1.3	1	8	6	40.7	40.8	-2.1
4	6	7	22.1	21.6	187.6	3	7	4	7.1	6.1	-23.6	1	8	7	33.4	32.5	1.0
4	6	8	1.4	2.1	-59.5	3	7	5	5.1	5.5	165.9	1	8	8	8.0	9.1	-13.2
4	6	9	26.4	24.2	0.3	3	7	6	43.7	43.7	-1.3	1	8	9	18.0	17.8	-2.7
3	6	10	21.1	17.1	183.7	3	7	7	18.2	17.3	6.3	4	9	4	10.7	10.3	176.6
3	6	9	3.6	0.8	-18.6	3	7	8	4.7	5.0	-18.0	4	9	3	15.3	15.0	181.5
3	6	8	23.9	24.2	-2.0	3	7	9	40.8	38.1	182.1	4	9	2	26.1	22.2	3.6
3	6	7	5.0	4.7	-4.1	2	7	9	22.3	21.6	4.4	4	9	1	11.9	11.2	10.1
3	6	6	76.1	74.3	182.3	2	7	8	9.0	8.1	203.6	4	9	0	1.4	2.1	185.8
3	6	5	1.4	2.8	180.8	2	7	7	19.9	19.2	176.8	4	9	-1	12.2	11.1	177.2
3	6	4	42.9	42.7	-4.7	2	7	6	29.4	29.6	-3.1	4	9	-2	26.3	22.1	-0.1
3	6	3	3.7	1.5	175.2	2	7	5	12.0	11.6	7.3	4	9	-3	15.5	15.1	3.6
3	6	2	16.5	18.4	192.3	2	7	4	3.4	4.4	194.4	4	9	-4	19.7	10.4	184.6
3	6	1	5.3	5.1	176.8	2	7	3	32.6	33.7	182.4	3	9	-6	38.5	35.0	178.6
3	6	0	132.4	119.7	0.9	2	7	2	28.8	26.4	1.7	3	9	-5	1.4	1.4	223.6
3	6	-1	4.5	5.1	3.1	2	7	1	19.4	19.3	-3.1	3	9	-4	49.0	44.1	6.2
3	6	-2	16.2	18.2	171.5	2	7	0	13.7	15.5	180.0	3	9	-3	3.9	3.0	3.3
3	6	-3	3.1	1.5	4.7	2	7	-1	19.3	19.4	187.5	3	9	-2	31.3	31.4	177.6
3	6	-4	42.9	42.8	8.6	2	7	-2	28.5	28.3	1.9	3	9	-1	3.0	1.3	87.4
3	6	-5	1.4	2.8	-0.0	2	7	-3	32.5	33.7	1.0	3	9	0	64.2	57.3	1.5
3	6	-6	78.9	74.4	179.3	2	7	-4	3.7	4.5	167.3	3	9	1	3.2	1.3	93.3
3	6	-7	5.6	4.7	184.1	2	7	-5	11.3	11.5	179.5	3	9	2	31.6	31.4	184.8
3	6	-8	23.7	24.1	7.7	2	7	-6	28.9	29.5	6.0	3	9	3	1.4	3.0	175.5
3	6	-9	4.2	0.3	198.4	2	7	-7	29.1	19.3	7.4	3	9	4	48.7	44.1	-2.9
3	6	-10	20.6	17.3	180.8	2	7	-8	8.4	8.3	158.4	3	9	5	1.4	1.4	-42.0
2	6	-10	16.4	17.3	15.2	2	7	-9	22.1	21.5	180.2	3	9	6	38.2	34.9	184.2
2	6	-9	14.8	14.3	1.6	1	7	-10	7.5	5.9	148.9	2	9	7	7.6	7.8	0.8
2	6	-8	15.3	14.1	161.9	1	7	-9	23.6	23.1	-1.1	2	9	6	1.4	2.3	-89.1
2	6	-7	18.4	19.0	184.6	1	7	-8	27.5	27.8	7.4	2	9	5	4.9	5.2	197.1
2	6	-6	36.6	36.8	175.2	1	7	-7	16.4	16.2	194.8	2	9	4	13.0	13.1	184.3
2	6	-5	19.8	20.5	-0.0	1	7	-6	22.2	22.6	5.8	2	9	3	3.1	5.0	9.1
2	6	-4	11.8	11.4	181.0	1	7	-5	13.7	14.2	-3.5	2	9	2	40.4	36.6	2.3
2	6	-3	20.7	21.4	181.8	1	7	-4	29.6	30.1	4.1	2	9	1	8.0	8.0	179.1
2	6	-2	41.8	41.2	-0.6	1	7	-3	40.9	42.0	180.1	2	9	0	18.3	18.0	1.2
2	6	-1	23.7	24.8	4.4	1	7	-2	11.8	12.7	179.2	2	9	-1	8.0	8.2	11.3
2	6	0	79.3	78.2	0.3	1	7	-1	19.3	20.1	10.0	2	9	-2	40.2	36.5	0.8
2	6	1	23.9	24.8	179.5	1	7	0	7.7	8.4	172.5	2	9	-3	5.2	5.0	187.9
2	6	2	41.7	41.4	3.6	1	7	1	19.4	20.2	170.6	2	9	-4	13.2	13.2	177.6
2	6	3	20.6	21.4	2.7	1	7	2	11.6	12.7	185.2	2	9	-5	4.0	4.9	-1.3
2	6	4	11.9	11.3	180.6	1	7	3	41.1	42.0	1.2	2	9	-6	2.8	2.8	92.8

2	6	5	19.8	20.6	184.5	1	7	4	29.8	30.1	0.8	2	9	-7	8.3	7.9	189.0
2	6	6	36.4	36.5	183.4	1	7	5	14.3	14.2	183.9	1	9	-8	2.7	3.9	130.7
2	6	7	18.7	18.9	-0.0	1	7	6	22.3	22.9	-6.9	1	9	-7	23.1	22.1	-1.2
2	6	8	15.3	14.1	200.9	1	7	7	16.4	16.2	-1.8	1	9	-6	28.3	27.1	4.6
2	6	9	15.0	14.3	184.3	1	7	8	27.5	27.8	-2.5	1	9	-5	25.4	24.5	184.3
2	6	10	16.4	17.2	-10.4	1	7	9	23.8	23.2	183.1	1	9	-4	2.2	1.7	215.4
1	6	11	29.9	27.4	180.3	1	7	10	6.5	6.2	219.7	1	9	-3	2.9	1.8	154.5
1	6	10	11.6	13.0	-10.8	6	8	0	10.3	10.7	180.7	1	9	-2	20.9	18.7	-1.1
1	6	9	23.8	23.1	-0.1	5	8	-4	18.7	15.9	3.5	1	9	-1	29.1	28.7	178.7
1	6	8	1.4	3.8	-52.2	5	8	-3	10.3	9.6	-0.0	1	9	0	15.7	17.1	180.9
1	6	7	23.8	24.3	185.7	5	8	-2	2.6	2.7	188.4	1	9	1	29.0	28.8	4.6
1	6	6	63.3	65.7	-1.7	5	8	-1	19.0	17.8	187.2	1	9	2	20.6	18.8	5.8
1	6	5	40.0	41.4	-1.0	5	8	0	23.0	19.5	2.8	1	9	3	1.3	1.7	-16.9
1	6	4	4.5	4.7	-24.1	5	8	1	19.1	17.9	-6.2	1	9	4	1.4	1.6	146.4
1	6	3	37.1	38.1	180.6	5	8	2	1.4	2.7	190.2	1	9	5	25.5	24.4	-0.4
1	6	2	21.6	21.8	-0.5	5	8	3	11.1	9.6	183.1	1	9	6	28.4	27.2	-0.8
1	6	1	40.4	42.0	4.4	5	8	4	18.8	16.0	3.6	1	9	7	23.2	22.1	185.1
1	6	0	57.0	61.8	180.2	4	8	6	16.5	13.6	0.2	1	9	8	2.6	3.9	232.8
1	6	-1	40.2	41.9	178.1	4	8	5	30.2	27.3	183.6	3	10	3	43.2	39.9	2.0
1	6	-2	21.9	21.8	5.2	4	8	4	1.4	2.5	191.0	3	10	2	10.7	8.3	-0.0
1	6	-3	37.1	38.1	1.7	4	8	3	10.7	10.9	180.2	3	10	1	5.0	4.4	184.7
1	6	-4	4.1	4.6	25.0	4	8	2	16.1	12.8	0.2	3	10	0	31.4	31.1	180.6
1	6	-5	40.4	41.4	183.4	4	8	1	29.7	27.4	180.9	3	10	-1	1.4	4.4	9.7
1	6	-6	64.7	65.6	3.6	4	8	0	1.4	2.9	186.5	3	10	-2	11.0	8.3	8.0
1	6	-7	23.7	24.2	-1.8	4	8	-1	29.3	27.5	2.7	3	10	3	43.2	39.9	2.0
1	6	-8	3.9	3.7	55.1	4	8	-2	15.6	12.8	5.7	2	10	-5	4.0	3.6	174.4
1	6	-9	23.8	23.1	183.4	4	8	-3	10.9	10.9	-3.7	2	10	-4	6.9	8.2	169.7
1	6	-10	11.8	13.1	17.0	4	8	-4	3.1	2.6	171.6	2	10	-3	32.8	31.8	1.3
1	6	-11	29.9	27.4	2.8	4	8	-5	30.3	27.3	0.1	2	10	-2	21.3	19.0	5.4
6	7	-4	6.6	7.4	188.2	4	8	-6	16.3	13.6	7.3	2	10	-1	6.1	6.6	196.4
6	7	3	52.4	48.9	1.5	3	8	-8	1.4	2.6	155.6	2	10	0	7.5	7.9	180.8
6	7	2	17.4	15.1	-1.0	3	8	-7	21.1	20.0	2.1	2	10	1	5.5	6.4	-4.7
6	7	1	6.3	6.1	186.6	3	8	-6	20.5	18.6	10.7	2	10	2	21.4	19.0	-1.4
6	7	0	8.4	9.7	181.8	3	8	-5	22.4	21.9	182.4	2	10	3	22.8	31.8	181.8
6	7	-1	7.3	6.1	4.1	3	8	-4	2.7	4.1	53.8	2	10	4	7.1	8.2	191.4
6	7	-2	17.5	15.1	5.5	3	8	-3	14.6	14.1	178.8	2	10	5	3.5	3.9	23.9
6	7	-3	52.5	48.9	181.1	3	8	-2	18.7	16.9	11.2	1	10	6	8.3	7.5	189.6
6	7	-4	6.5	7.5	172.4	3	8	-1	25.6	25.4	181.4	1	10	5	5.6	5.8	192.7
6	7	-5	7.9	7.6	16.3	3	8	0	3.6	5.3	179.6	1	10	4	25.4	22.1	2.6
6	7	-5	7.0	6.2	165.2	3	8	1	25.4	25.4	2.0	1	10	3	19.0	17.7	1.0
6	7	-4	7.9	5.8	-4.5	3	8	2	18.8	16.8	-5.4	1	10	2	10.4	10.2	182.7
6	7	-3	37.9	36.9	1.4	3	8	3	14.7	14.2	-3.9	1	10	1	7.7	7.4	163.1
6	7	-2	13.7	11.7	-2.4	3	8	4	3.1	4.4	-53.9	1	10	0	25.6	22.6	2.4
6	7	-1	5.2	5.4	217.7	3	8	5	22.1	21.8	1.5	1	10	-1	7.2	7.4	19.3
6	7	0	8.2	6.3	0.3	3	8	6	20.1	18.6	-6.9	1	10	-2	10.2	10.2	182.6
6	7	1	4.6	4.7	-23.5	3	8	7	21.3	20.0	181.8	1	10	-3	18.7	17.7	180.8
6	7	2	13.4	11.9	9.9	3	8	8	3.5	2.7	213.4	1	10	-4	25.3	22.1	2.9
6	7	3	38.1	36.9	181.1	2	8	8	23.0	21.8	-2.0	1	10	-5	6.7	5.8	-10.1
6	7	4	7.5	5.9	2.4	2	8	7	8.7	7.9	154.2	1	10	-6	8.2	7.5	174.8
6	7	5	7.8	6.6	26.2	2	8	6	8.4	8.2	194.4	2	11	1	1.4	2.3	254.4
6	7	6	7.9	7.5	-8.2	2	8	5	3.7	4.2	22.3	2	11	0	22.1	16.4	3.4
4	7	8	25.8	24.3	-4.7	2	8	4	16.4	15.7	1.2	2	11	-1	1.4	2.5	-74.8
4	7	7	1.4	3.5	-35.5	2	8	3	19.4	19.6	182.4	1	11	-4	1.4	1.7	94.4
4	7	6	5.0	3.8	-36.8	2	8	2	4.0	4.9	192.8	1	11	-3	10.7	9.5	-3.6
4	7	5	2.6	2.0	213.5	2	8	1	7.9	8.0	-23.7	1	11	-2	12.8	10.0	12.2
4	7	4	30.2	28.8	4.1	2	8	0	29.1	28.1	2.2	1	11	-1	18.0	16.6	4.1
4	7	3	26.5	27.3	0.8	2	8	-1	8.6	8.1	205.3	1	11	0	17.5	18.9	181.0
4	7	2	14.0	15.0	176.9	2	8	-2	4.1	4.8	177.7	1	11	1	18.1	16.6	181.5
4	7	1	4.6	3.8	148.3	2	8	-3	19.4	19.6	0.0	1	11	2	12.5	9.9	-5.2
4	7	0	16.0	12.4	4.8	2	8	-4	16.5	15.7	7.2	1	11	3	11.1	9.4	179.7
4	7	-1	3.2	3.9	35.2	2	8	-5	4.1	4.2	159.7	1	11	4	1.4	1.8	269.3
4	7	-2	13.5	15.1	186.5												