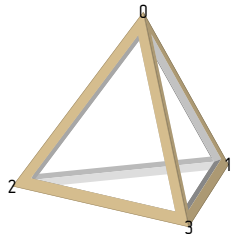
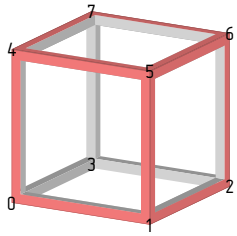


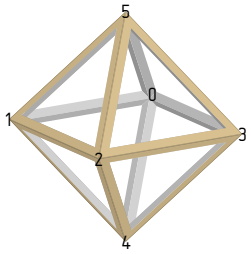
Тетраэдр

0 = (0, 0, 1);	α = sqrt(2)/3;	0, 2, 3;
1 = (0, 2α, −1/3);	β = sqrt(2/3);	0, 3, 1;
2 = (−β, −α, −1/3);		0, 1, 2;
3 = (β, −α, −1/3);		3, 2, 1;



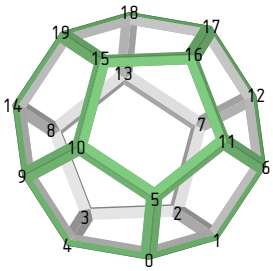
Куб

0 = (−α, −α, −α);	α = 1/sqrt(3);
1 = (α, −α, −α);	
2 = (α, α, −α);	1, 5, 4, 0;
3 = (−α, α, −α);	6, 7, 4, 5;
4 = (−α, −α, α);	2, 6, 5, 1;
5 = (α, −α, α);	7, 6, 2, 3;
6 = (α, α, α);	4, 7, 3, 0;
7 = (−α, α, α);	0, 3, 2, 1;



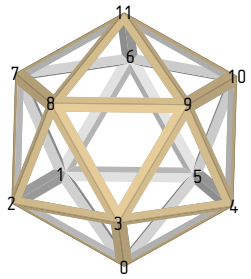
Октаэдр

0 = (0, 1, 0);	0, 1, 5;
1 = (−1, 0, 0);	1, 2, 5;
2 = (0, −1, 0);	2, 3, 5;
3 = (1, 0, 0);	3, 0, 5;
4 = (0, 0, −1);	1, 0, 4;
5 = (0, 0, 1);	2, 1, 4;
	3, 2, 4;
	0, 3, 4;



Додекаэдр

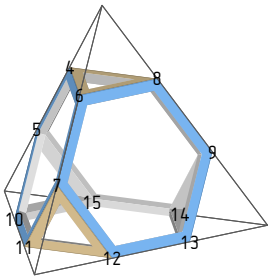
0 = (0, −β, −α);	α = (sqrt(5)+1)sqrt(5+sqrt(5))/(2sqrt(30));	0, 4, 3, 2, 1;
1 = (δ, −γ, −α);	β = sqrt(2(5−sqrt(5))/15);	11, 5, 0, 1, 6;
2 = (η, ζ, −α);	γ = (sqrt(5)−2)α;	12, 6, 1, 2, 7;
3 = (−η, ζ, −α);	δ = 1/sqrt(3);	13, 7, 2, 3, 8;
4 = (−δ, −γ, −α);	ε = sqrt(2(5+sqrt(5))/15);	14, 8, 3, 4, 9;
5 = (0, −ε, −γ);	ζ = β/(sqrt(5)−1);	10, 9, 4, 0, 5;
6 = (ι, −ϑ, −γ);	η = (sqrt(5)−1)/(2sqrt(3));	16, 11, 6, 12, 17;
7 = (δ, α, −γ);	ϑ = ε/(sqrt(5)+1);	17, 12, 7, 13, 18;
8 = (−δ, α, −γ);	ι = (sqrt(5)+1)/(2sqrt(3));	18, 13, 8, 14, 19;
9 = (−ι, −ϑ, −γ);		19, 14, 9, 10, 15;
10 = (−δ, −α, γ);		15, 10, 5, 11, 16;
11 = (δ, −α, γ);		15, 16, 17, 18, 19;
12 = (ι, ϑ, γ);		
13 = (0, ε, γ);		
14 = (−ι, ϑ, γ);		
15 = (−η, −ζ, α);		
16 = (η, −ζ, α);		
17 = (δ, γ, α);		
18 = (0, β, α);		
19 = (−δ, γ, α);		



Икосаэдр

0 = (0, 0, −1);	α = 1/sqrt(5);	0, 1, 5;	1, 7, 6;
1 = (0, 2α, −α);	β = (5+sqrt(5))/10;	0, 2, 1;	2, 8, 7;
2 = (−ε, γ, −α);	γ = (5−sqrt(5))/10;	0, 3, 2;	3, 9, 8;
3 = (−δ, −β, −α);	δ = sqrt(γ);	0, 4, 3;	4, 10, 9;
4 = (δ, −β, −α);	ε = sqrt(β);	0, 5, 4;	5, 6, 10;
5 = (ε, γ, −α);		5, 1, 6;	11, 8, 9;
6 = (δ, β, α);		1, 2, 7;	11, 9, 10;
7 = (−δ, β, α);		2, 3, 8;	11, 10, 6;
8 = (−ε, −γ, α);		3, 4, 9;	11, 6, 7;
9 = (0, −2α, α);		4, 5, 10;	11, 7, 8;
10 = (ε, −γ, α);			
11 = (0, 0, 1);			

Усечённый тетраэдр

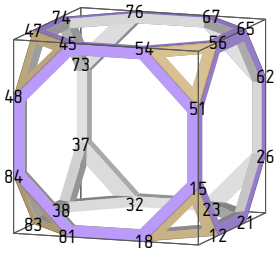


4 = (0, 2β, 5α);
5 = (0, 4β, α);
6 = (−γ, −β, 5α);
7 = (−2γ, −2β, α);
8 = (γ, −β, 5α);
9 = (2γ, −2β, α);
10 = (−γ, 3β, −3α);
11 = (−2γ, 0, −3α);
12 = (−γ, −3β, −3α);
13 = (γ, −3β, −3α);
14 = (2γ, 0, −3α);
15 = (γ, 3β, −3α);

α = 1/sqrt(33);
β = α sqrt(2);
γ = α sqrt(6);

8, 6, 7, 12, 13, 9;
4, 8, 9, 14, 15, 5;
6, 4, 5, 10, 11, 7;
11, 10, 15, 14, 13, 12;
4, 6, 8;
9, 13, 14;
7, 11, 12;
10, 5, 15;

Усечённый куб



12 = (α, −β, −α);
15 = (α, −α, −β);
18 = (β, −α, −α);
21 = (α, β, −α);
23 = (β, α, −α);
26 = (α, α, −β);
32 = (−β, α, −α);
37 = (−α, α, −β);
38 = (−α, β, −α);
45 = (−β, −α, α);
47 = (−α, −β, α);
48 = (−α, −α, β);

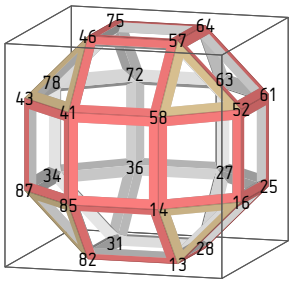
51 = (α, −α, β);
54 = (β, −α, α);
56 = (α, −β, α);
62 = (α, α, β);
65 = (α, β, α);
67 = (β, α, α);
73 = (−α, α, β);
74 = (−α, β, α);
76 = (−β, α, α);
81 = (−β, −α, −α);
83 = (−α, −β, −α);
84 = (−α, −α, −β);

α = 1/sqrt(5−2sqrt(2));
β = (sqrt(2)−1)α;

67, 76, 74, 47, 45, 54, 56, 65;
54, 45, 48, 84, 81, 18, 15, 51;
51, 15, 12, 21, 26, 62, 65, 56;
47, 74, 73, 37, 38, 83, 84, 48;
76, 67, 62, 26, 23, 32, 37, 73;
18, 81, 83, 38, 32, 23, 21, 12;

84, 83, 81;
56, 54, 51;
45, 47, 48;
74, 76, 73;
65, 62, 67;
15, 18, 12;
37, 32, 38;
26, 21, 23;

Ромбокубооктаэдр



13 = (β, −β, −α);
14 = (β, −α, −β);
16 = (α, −β, −β);
25 = (α, β, −β);
27 = (β, α, −β);
28 = (β, β, −α);
31 = (−β, β, −α);
34 = (−α, β, −β);
36 = (−β, α, −β);
41 = (−β, −α, β);
43 = (−α, −β, β);
46 = (−β, −β, α);

52 = (α, −β, β);
57 = (β, −β, α);
58 = (β, −α, β);
61 = (α, β, β);
63 = (β, α, β);
64 = (β, β, α);
72 = (−β, α, β);
75 = (−β, β, α);
78 = (−α, β, β);
82 = (−β, −β, −α);
85 = (−β, −α, −β);
87 = (−α, −β, −β);

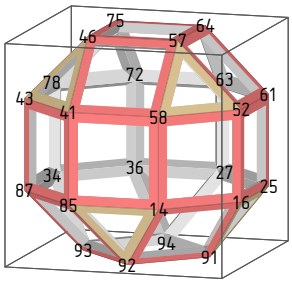
α = 1/sqrt(7−4sqrt(2));
β = (sqrt(2)−1)α;

75, 46, 57, 64;
58, 41, 85, 14;
57, 46, 41, 58;
61, 52, 16, 25;
72, 63, 27, 36;
43, 78, 34, 87;
64, 57, 52, 61;
58, 14, 16, 52;
27, 63, 61, 25;

72, 36, 34, 78;
75, 64, 63, 72;
46, 75, 78, 43;
85, 41, 43, 87;
14, 85, 82, 13;
31, 28, 13, 82;
25, 16, 13, 28;
28, 31, 36, 27;
31, 82, 87, 34;

57, 58, 52;
63, 64, 61;
75, 72, 78;
46, 43, 41;
85, 87, 82;
16, 14, 13;
36, 31, 34;
25, 28, 27;

Псевдоромбокубооктаэдр



14 = (β, −α, −β);
16 = (α, −β, −β);
25 = (α, β, −β);
27 = (β, α, −β);
34 = (−α, β, −β);
36 = (−β, α, −β);
41 = (−β, −α, β);
43 = (−α, −β, β);
46 = (−β, −β, α);
52 = (α, −β, β);
57 = (β, −β, α);
58 = (β, −α, β);

61 = (α, β, β);
63 = (β, α, β);
64 = (β, β, α);
72 = (−β, α, β);
75 = (−β, β, α);
78 = (−α, β, β);
85 = (−β, −α, −β);
87 = (−α, −β, −β);
91 = (γ, 0, −α);
92 = (0, −γ, −α);
93 = (−γ, 0, −α);
94 = (0, γ, −α);

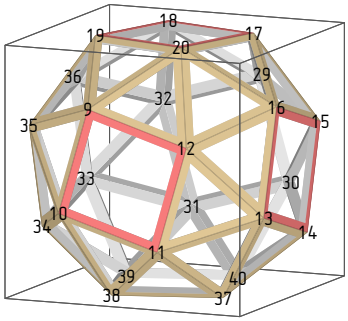
α = 1/sqrt(7−4sqrt(2));
β = (sqrt(2)−1)α;
γ = (2−sqrt(2))α;

75, 46, 57, 64;
58, 41, 85, 14;
57, 46, 41, 58;
61, 52, 16, 25;
72, 63, 27, 36;
43, 78, 34, 87;
64, 57, 52, 61;
58, 14, 16, 52;
27, 63, 61, 25;

72, 36, 34, 78;
75, 64, 63, 72;
46, 75, 78, 43;
85, 41, 43, 87;
16, 14, 92, 91;
93, 94, 91, 92;
27, 25, 91, 94;
94, 93, 34, 36;
93, 92, 85, 87;

57, 58, 52;
63, 64, 61;
75, 72, 78;
46, 43, 41;
14, 85, 92;
25, 16, 91;
34, 93, 87;
27, 94, 36;

Курносый куб



9 = (−α, −γ, β);
10 = (−β, −γ, −α);
11 = (α, −γ, −β);
12 = (β, −γ, α);
13 = (γ, −β, −α);
14 = (γ, α, −β);
15 = (γ, β, α);
16 = (γ, −α, β);
17 = (β, α, γ);
18 = (−α, β, γ);
19 = (−β, −α, γ);
20 = (α, −β, γ);

29 = (α, γ, β);
30 = (β, γ, −α);
31 = (−α, γ, −β);
32 = (−β, γ, α);
33 = (−γ, β, −α);
34 = (−γ, −α, −β);
35 = (−γ, −β, α);
36 = (−γ, α, β);
37 = (β, −α, −γ);
38 = (−α, −β, −γ);
39 = (−β, α, −γ);
40 = (α, β, −γ);

δ = (curt(6sqrt(33)+26)−
−curt(6sqrt(33)−26)−1)/3;
ε = $(\delta^2+1)/2$;
ζ = $\mathrm{sqrt}(1+\delta^2+\varepsilon^2)$;
α = δ/ζ;
β = ε/ζ;
γ = 1/ζ;

10, 9, 35;
11, 10, 38;
12, 11, 13;
9, 12, 20;
13, 16, 12;
14, 13, 37;
15, 14, 30;
16, 15, 17;

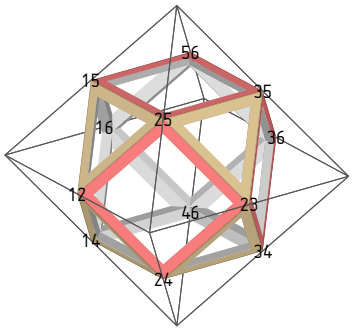
17, 20, 16;
18, 17, 29;
19, 18, 36;
20, 19, 9;
29, 15, 30;
31, 30, 40;
32, 31, 33;
29, 32, 18;

33, 36, 32;
34, 33, 39;
35, 34, 10;
36, 35, 19;
37, 40, 14;
38, 37, 11;
39, 38, 34;
40, 39, 31;

16, 20, 12;
11, 37, 13;
30, 14, 40;
34, 38, 10;
9, 19, 35;
15, 29, 17;
18, 32, 36;
39, 33, 31;

9, 10, 11, 12;
13, 14, 15, 16;
17, 18, 19, 20;
29, 30, 31, 32;
33, 34, 35, 36;
37, 38, 39, 40;

Кубооктаэдр



12 = (−α, −α, 0);
14 = (−α, 0, −α);
15 = (−α, 0, α);
16 = (−α, α, 0);
23 = (α, −α, 0);
24 = (0, −α, −α);

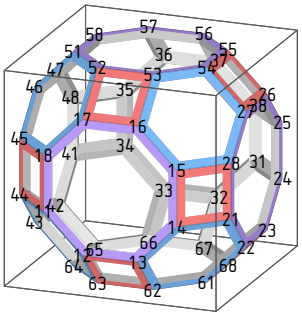
25 = (0, −α, α);
34 = (α, 0, −α);
35 = (α, 0, α);
36 = (α, α, 0);
46 = (0, α, −α);
56 = (0, α, α);

α= 1/sqrt(2);

56, 15, 25, 35;
34, 24, 14, 46;
56, 36, 46, 16;
15, 16, 14, 12;
12, 24, 23, 25;
36, 35, 23, 34;

16, 15, 56;
12, 25, 15;
23, 35, 25;
36, 56, 35;

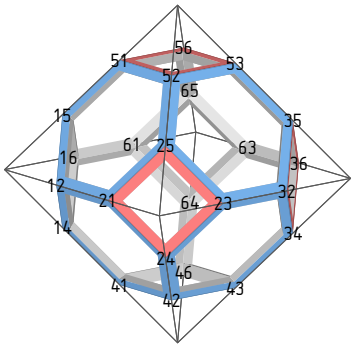
16, 46, 14;
12, 14, 24;
23, 24, 34;
36, 34, 46;



Усечённый кубооктаэдр

11 = (−γ, −α, −β);	41 = (−α, γ, −β);	β = 1/sqrt(13+6sqrt(2));
12 = (−β, −α, −γ);	42 = (−α, β, −γ);	α = (1+2sqrt(2))β;
13 = (β, −α, −γ);	43 = (−α, −β, −γ);	γ = (1+sqrt(2))β;
14 = (γ, −α, −β);	44 = (−α, −γ, −β);	
15 = (γ, −α, β);	45 = (−α, −γ, β);	
16 = (β, −α, γ);	46 = (−α, −β, γ);	
17 = (−β, −α, γ);	47 = (−α, β, γ);	
18 = (−γ, −α, β);	48 = (−α, γ, β);	
21 = (α, −γ, −β);	51 = (−γ, −β, α);	
22 = (α, −β, −γ);	52 = (−β, −γ, α);	
23 = (α, β, −γ);	53 = (β, −γ, α);	
24 = (α, γ, −β);	54 = (γ, −β, α);	
25 = (α, γ, β);	55 = (γ, β, α);	
26 = (α, β, γ);	56 = (β, γ, α);	
27 = (α, −β, γ);	57 = (−β, γ, α);	
28 = (α, −γ, β);	58 = (−γ, β, α);	
31 = (γ, α, −β);	61 = (γ, −β, −α);	
32 = (β, α, −γ);	62 = (β, −γ, −α);	
33 = (−β, α, −γ);	63 = (−β, −γ, −α);	
34 = (−γ, α, −β);	64 = (−γ, −β, −α);	
35 = (−γ, α, β);	65 = (−γ, β, −α);	
36 = (−β, α, γ);	66 = (−β, γ, −α);	
37 = (β, α, γ);	67 = (β, γ, −α);	
38 = (γ, α, β);	68 = (γ, β, −α);	

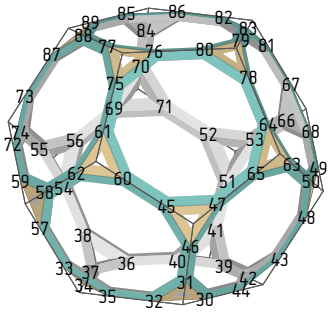
15, 14, 21, 28;	15, 28, 27, 54, 53, 16;	11, 12, 13, 14, 15, 16, 17, 18;
45, 44, 11, 18;	14, 13, 62, 61, 22, 21;	21, 22, 23, 24, 25, 26, 27, 28;
35, 34, 41, 48;	12, 11, 44, 43, 64, 63;	31, 32, 33, 34, 35, 36, 37, 38;
25, 24, 31, 38;	18, 17, 52, 51, 46, 45;	41, 42, 43, 44, 45, 46, 47, 48;
53, 52, 17, 16;	58, 57, 36, 35, 48, 47;	51, 52, 53, 54, 55, 56, 57, 58;
55, 54, 27, 26;	56, 55, 26, 25, 38, 37;	61, 62, 63, 64, 65, 66, 67, 68;
57, 56, 37, 36;	24, 23, 68, 67, 32, 31;	
51, 58, 47, 46;	66, 65, 42, 41, 34, 33;	
61, 68, 23, 22;		
63, 62, 13, 12;		
65, 64, 43, 42;		
67, 66, 33, 32;		



Усечённый октаэдр

12 = (−2α, −α, 0);	41 = (−α, 0, −2α);	α = 1/sqrt(5);
14 = (−2α, 0, −α);	42 = (0, −α, −2α);	
15 = (−2α, 0, α);	43 = (α, 0, −2α);	
16 = (−2α, α, 0);	46 = (0, α, −2α);	
21 = (−α, −2α, 0);	51 = (−α, 0, 2α);	
23 = (α, −2α, 0);	52 = (0, −α, 2α);	
24 = (0, −2α, −α);	53 = (α, 0, 2α);	
25 = (0, −2α, α);	56 = (0, α, 2α);	
32 = (2α, −α, 0);	61 = (−α, 2α, 0);	
34 = (2α, 0, −α);	63 = (α, 2α, 0);	
35 = (2α, 0, α);	64 = (0, 2α, −α);	
36 = (2α, α, 0);	65 = (0, 2α, α);	

61, 16, 15, 51, 56, 65;	16, 61, 64, 46, 41, 14;	56, 51, 52, 53;
12, 21, 25, 52, 51, 15;	21, 12, 14, 41, 42, 24;	43, 42, 41, 46;
23, 32, 35, 53, 52, 25;	32, 23, 24, 42, 43, 34;	65, 63, 64, 61;
36, 63, 65, 56, 53, 35;	63, 36, 34, 43, 46, 64;	15, 16, 14, 12;
		21, 24, 23, 25;
		36, 35, 32, 34;



Усечённый додекаэдр

30 = (α, −β, −γ);
31 = (0, −η, −ϑ);
32 = (−α, −β, −γ);
33 = (−λ, −ι, −ϑ);
34 = (−δ, 0, −γ);
35 = (−ξ, −ο, −γ);
36 = (−α, β, −γ);
37 = (−ξ, ο, −γ);
38 = (−ξ, ρ, −ϑ);
39 = (ξ, ο, −γ);
40 = (α, β, −γ);
41 = (ξ, ρ, −ϑ);
42 = (δ, 0, −γ);
43 = (λ, −ι, −ϑ);
44 = (ξ, −ο, −γ);
45 = (−α, −μ, −κ);
46 = (0, −ε, −ζ);
47 = (α, −μ, −κ);
48 = (2ξ, −τ, −ζ);
49 = (φ, −χ, −κ);
50 = (2ξ, −υ, −κ);
51 = (δ, η, −ζ);
52 = (ξ, σ, −κ);
53 = (λ, ν, −κ);
54 = (−δ, η, −ζ);
55 = (−λ, ν, −κ);
56 = (−ξ, σ, −κ);
57 = (−2ξ, −τ, −ζ);
58 = (−2ξ, −υ, −κ);
59 = (−φ, −χ, −κ);
60 = (−ξ, −σ, κ);
61 = (−δ, −η, ζ);
62 = (−λ, −ν, κ);
63 = (λ, −ν, κ);
64 = (δ, −η, ζ);
65 = (ξ, −σ, κ);
66 = (2ξ, υ, κ);
67 = (2ξ, τ, ζ);
68 = (φ, χ, κ);
69 = (−α, μ, κ);
70 = (0, ε, ζ);
71 = (α, μ, κ);
72 = (−φ, χ, κ);
73 = (−2ξ, τ, ζ);
74 = (−2ξ, υ, κ);
75 = (−ξ, −ρ, ϑ);
76 = (−α, −β, γ);
77 = (−ξ, −ο, γ);
78 = (ξ, −ρ, ϑ);
79 = (ξ, −ο, γ);
80 = (α, −β, γ);
81 = (λ, ι, ϑ);
82 = (ξ, ο, γ);
83 = (δ, 0, γ);
84 = (0, η, ϑ);
85 = (−α, β, γ);
86 = (α, β, γ);
87 = (−λ, ι, ϑ);
88 = (−δ, 0, γ);
89 = (−ξ, ο, γ);

α = (sqrt(5)−1)/(2sqrt(9+2sqrt(5)));
β = sqrt((5−sqrt(5))/(17−3sqrt(5)));
γ = sqrt((5+sqrt(5))/(17−3sqrt(5)));
δ = 2/sqrt(9+2sqrt(5));
ε = 4sqrt(2/(35+sqrt(5));
ζ = ε(sqrt(5)+1)/8;
η = 2/sqrt(25−8sqrt(5));
ϑ = sqrt(1−η^2);
ι = η/(sqrt(5)+1);
κ = (sqrt(5)−1)/sqrt(110+38sqrt(5));
λ = sqrt((5+sqrt(5))/(50−16sqrt(5)));
μ = sqrt(2/(295−131sqrt(5)));
ν = 3ε/4;
ξ = δ/(sqrt(5)−1);
ο = sqrt(10/(55+19sqrt(5)));
ρ = η/(sqrt(5)−1);
σ = 11sqrt(2/(395−41sqrt(5)));
τ = 2ο/sqrt(5);
υ = ε/2;
φ = 2sqrt((45+10sqrt(5)))/(7sqrt(5)+1);
χ = ο/sqrt(5);

30, 31, 32;
33, 34, 35;
36, 37, 38;
39, 40, 41;
42, 43, 44;
45, 46, 47;
48, 49, 50;
51, 52, 53;
54, 55, 56;
57, 58, 59;

60, 61, 62;
63, 64, 65;
66, 67, 68;
69, 70, 71;
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75, 76, 77;
78, 79, 80;
81, 82, 83;
84, 85, 86;
87, 88, 89;

32, 35, 34, 37, 36, 40, 39, 42, 44, 30;
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42, 39, 41, 51, 53, 66, 68, 49, 48, 43;
40, 36, 38, 54, 56, 69, 71, 52, 51, 41;
37, 34, 33, 57, 59, 72, 74, 55, 54, 38;
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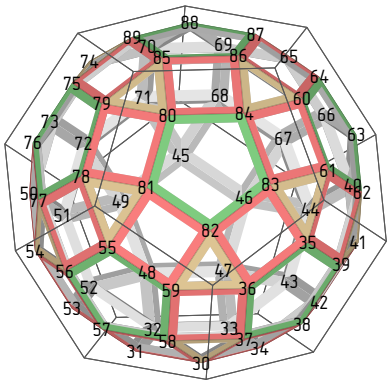
Ромбоикосододекаэдр



30 = (0, −β, −3ζ);
31 = (−γ, −δ, −3ζ);
32 = (−ε, ζ, −3ζ);
33 = (ε, ζ, −3ζ);
34 = (γ, −δ, −3ζ);
35 = (η, −ϑ, −ι);
36 = (ε, −3ζ, −ζ);
37 = (ε, −ϰ, −ϰ);
38 = (η, −λ, −ϰ);
39 = (μ, −ν, −ζ);
40 = (ξ, ζ, −ι);
41 = (ξ, −ι, −ζ);
42 = (2γ, 0, −ϰ);
43 = (η, λ, −ϰ);
44 = (2γ, 2ζ, −ζ);
45 = (0, 2ν, −ι);
46 = (γ, τ, −ζ);
47 = (ε, ϰ, −ϰ);
48 = (−ε, ϰ, −ϰ);
49 = (−γ, τ, −ζ);
50 = (−ξ, ζ, −ι);
51 = (−2γ, 2ζ, −ζ);
52 = (−η, λ, −ϰ);
53 = (−2γ, 0, −ϰ);
54 = (−ξ, −ι, −ζ);
55 = (−η, −ϑ, −ι);
56 = (−μ, −ν, −ζ);
57 = (−η, −λ, −ϰ);
58 = (−ε, −ϰ, −ϰ);
59 = (−ε, −3ζ, −ζ);
60 = (η, −λ, ϰ);
61 = (2γ, −2ζ, ζ);
62 = (ξ, −ζ, ι);
63 = (ξ, ι, ζ);
64 = (2γ, 0, ϰ);
65 = (η, λ, ϰ);
66 = (μ, ν, ζ);
67 = (η, ϑ, ι);
68 = (ε, 3ζ, ζ);
69 = (ε, ϰ, ϰ);
70 = (−ε, ϰ, ϰ);
71 = (−ε, 3ζ, ζ);
72 = (−η, ϑ, ι);
73 = (−μ, ν, ζ);
74 = (−η, λ, ϰ);
75 = (−2γ, 0, ϰ);
76 = (−ξ, ι, ζ);
77 = (−ξ, −ζ, ι);
78 = (−2γ, −2ζ, ζ);
79 = (−η, −λ, ϰ);
80 = (−ε, −ϰ, ϰ);
81 = (−γ, −τ, ζ);
82 = (0, −2ν, ι);
83 = (γ, −τ, ζ);
84 = (ε, −ϰ, ϰ);
85 = (−ε, −ζ, 3ζ);
86 = (ε, −ζ, 3ζ);
87 = (γ, δ, 3ζ);
88 = (0, β, 3ζ);
89 = (−γ, δ, 3ζ);

ζ = 1/sqrt((15−2sqrt(5)));
γ = sqrt(2/(13+sqrt(5)));
δ = sqrt(2/(75+31sqrt(5)));
β = (sqrt(5)+1)δ;
ε = 1/sqrt(11+4sqrt(5));
η = sqrt(2/(17−5sqrt(5)));
ϑ = sqrt(2/(135−59sqrt(5)));
ι = 1/sqrt(95+42sqrt(5));
ϰ = ζ sqrt(5);
λ = sqrt(10/(35+9sqrt(5)));
μ = (5+sqrt(5))ε/2;
ν = sqrt(2/(55−21sqrt(5)));
ξ = 1/sqrt(19−8sqrt(5));
τ = 11sqrt(2/(315−sqrt(5)));

30, 31, 32, 33, 34;
35, 36, 37, 38, 39;
40, 41, 42, 43, 44;
45, 46, 47, 48, 49;
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65, 66, 67, 68, 69;
70, 71, 72, 73, 74;
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56, 55, 78, 77;
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74, 73, 76, 75;
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44, 46, 67;
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35, 61, 83;
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45, 71, 68;
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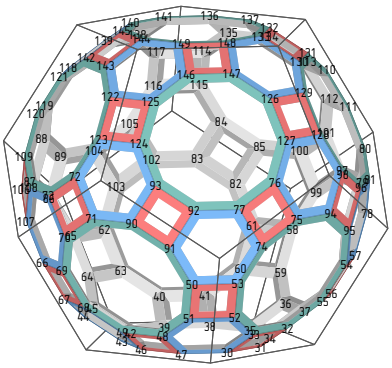
74, 75, 89;

Усечённый икосододекаэдр



30 = (α, −οε, −5ο);
31 = (ϑ−α, −ζ, −5ο);
32 = (ϑ, −ι, −η);
33 = (2α, ζ−οε−ι, −η);
34 = (2ϑ/ε, 0, −5ο);
35 = (ϑ−α, ζ, −5ο);
36 = (γ, ζ+τ, −η);
37 = (3ϑ/ε, τ, −η);
38 = (α, οε, −5ο);
39 = (−α, οε, −5ο);
40 = (−α, ν, −η);
41 = (α, ν, −η);
42 = (α−ϑ, ζ, −5ο);
43 = (−2ϑ/ε, 0, −5ο);
44 = (−3ϑ/ε, τ, −η);
45 = (−γ, ζ+τ, −η);
46 = (α−ϑ, −ζ, −5ο);
47 = (−α, −οε, −5ο);
48 = (−2α, ζ−οε−ι, −η);
49 = (−ϑ, −ι, −η);
50 = (−α, −γ, −οε);
51 = (−α, −η, −ν);
52 = (α, −η, −ν);
53 = (α, −γ, −οε);
54 = (δ, −οε, −οε);
55 = (2ϑ−2α, −2ο, −ν);
56 = (φ, −ζ/ε, −ν);
57 = (χ, −τε, −οε);
58 = (3ϑ/ε, 3λ/ε, −οε);
59 = (γ, 3ο, −ν);
60 = (ϑ−α, β, −ν);
61 = (2ϑ/ε, 2οε, −οε);
62 = (−2ϑ/ε, 2οε, −οε);
63 = (α−ϑ, β, −ν);
64 = (−γ, 3ο, −ν);
65 = (−3ϑ/ε, 3λ/ε, −οε);
66 = (−χ, −τε, −οε);
67 = (−φ, −ζ/ε, −ν);
68 = (2α−2ϑ, −2ο, −ν);
69 = (−δ, −οε, −οε);
70 = (−δ, −3ο, −ο);
71 = (2α−2ϑ, −4ο, −κ);
72 = (−φ, −ξ, ο);
73 = (−χ, −ι, κ);
74 = (2α, −ρ, −ο);
75 = (ϑ, −λ, −κ);
76 = (ϑ−α, ρ−λ−σ, ο);
77 = (α, −σ, κ);
78 = (μ, −κ, −ο);
79 = (μ, ο, −κ);
80 = (μ, κ, ο);
81 = (μ, −ο, κ);
82 = (ϑ−α, λ+σ−ρ, −ο);
83 = (α, σ, −κ);
84 = (2α, ρ, ο);
85 = (ϑ, λ, κ);
86 = (−φ, ξ, −ο);
87 = (−χ, ι, −κ);
88 = (−δ, 3ο, ο);
89 = (2α−2ϑ, 4ο, κ);
90 = (−ϑ, −λ, −κ);
91 = (−2α, −ρ, −ο);
92 = (−α, −σ, κ);
93 = (α−ϑ, ρ−λ−σ, ο);
94 = (2ϑ−2α, −4ο, −κ);
95 = (δ, −3ο, −ο);
96 = (χ, −ι, κ);
97 = (φ, −ξ, ο);
98 = (χ, ι, −κ);
99 = (φ, ξ, −ο);
100 = (2ϑ−2α, 4ο, κ);
101 = (δ, 3ο, ο);
102 = (−α, σ, −κ);
103 = (α−ϑ, λ+σ−ρ, −ο);
104 = (−ϑ, λ, κ);
105 = (−2α, ρ, ο);
106 = (−μ, ο, −κ);
107 = (−μ, −κ, −ο);
108 = (−μ, −ο, κ);
109 = (−μ, κ, ο);
110 = (φ, ζ/ε, ν);
111 = (χ, τε, οε);
112 = (δ, οε, οε);
113 = (2ϑ−2α, 2ο, ν);
114 = (α, η, ν);
115 = (α, γ, οε);
116 = (−α, γ, οε);
117 = (−α, η, ν);
118 = (2α−2ϑ, 2ο, ν);
119 = (−δ, οε, οε);
120 = (−χ, τε, οε);
121 = (−φ, ζ/ε, ν);
122 = (−γ, −3ο, ν);
123 = (−3ϑ/ε, −3λ/ε, οε);
124 = (−2ϑ/ε, −2οε, οε);
125 = (α−ϑ, −β, ν);
126 = (ϑ−α, −β, ν);
127 = (2ϑ/ε, −2οε, οε);
128 = (3ϑ/ε, −3λ/ε, οε);
129 = (γ, −3ο, ν);
130 = (γ, −ζ−τ, η);
131 = (3ϑ/ε, −τ, η);
132 = (2ϑ/ε, 0, 5ο);
133 = (ϑ−α, −ζ, 5ο);
134 = (ϑ, ι, η);
135 = (2α, οε+ι−ζ, η);
136 = (α, οε, 5ο);
137 = (ϑ−α, ζ, 5ο);
138 = (−2α, οε+ι−ζ, η);
139 = (−ϑ, ι, η);
140 = (α−ϑ, ζ, 5ο);
141 = (−α, οε, 5ο);
142 = (−3ϑ/ε, −τ, η);
143 = (−γ, −ζ−τ, η);
144 = (α−ϑ, −ζ, 5ο);
145 = (−2ϑ/ε, 0, 5ο);
146 = (−α, −ν, η);
147 = (α, −ν, η);
148 = (α, −οε, 5ο);
149 = (−α, −οε, 5ο);

ε = sqrt(5);
α = 1/sqrt(31+12ε);
β = 11sqrt(2/(835−151ε));
γ = 1/sqrt(39−16ε);
δ = 11/sqrt(171+4ε);
ζ = sqrt(10/(95+29ε));
η = 1/sqrt(355−158ε);
ϑ = sqrt(10/(33+5ε));
ι = 11sqrt(2/(875+191ε));
κ = 1/sqrt(275+122ε);
λ = 3sqrt(2/(115−41ε));
μ = 11/sqrt(179-24ε);
ν = 19/sqrt(695+98ε);
ξ = 19sqrt(2/(1415+229ε));;
ο = 1/sqrt(35−2ε);
ρ = 2sqrt(2/(275−119ε));
σ = 19/sqrt(775−182ε);
τ = sqrt(2/(215+91ε));
φ = 5sqrt(2/(185−45ε));
χ = sqrt(2/(197−87ε));

30, 31, 32, 33;
34, 35, 36, 37;
38, 39, 40, 41;
42, 43, 44, 45;
46, 47, 48, 49;
50, 51, 52, 53;
54, 55, 56, 57;
58, 59, 60, 61;
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66, 67, 68, 69;
70, 71, 72, 73;
74, 75, 76, 77;
78, 79, 80, 81;
82, 83, 84, 85;
86, 87, 88, 89;

90, 91, 92, 93;
94, 95, 96, 97;
98, 99, 100, 101;
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106, 107, 108, 109;
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114, 115, 116, 117;
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126, 127, 128, 129;
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142, 143, 144, 145;
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83, 82, 61, 60, 41, 40, 63, 62, 103, 102;
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71, 70, 69, 68, 49, 48, 51, 50, 91, 90;
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31, 34, 37, 56, 55, 32;
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57, 78, 81, 96, 95, 54;
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65, 86, 89, 104, 103, 62;
69, 70, 73, 108, 107, 66;

75, 94, 97, 128, 127, 76;
79, 98, 101, 112, 111, 80;
83, 102, 105, 116, 115, 84;
87, 106, 109, 120, 119, 88;
71, 90, 93, 124, 123, 72;
131, 110, 113, 134, 137, 132;
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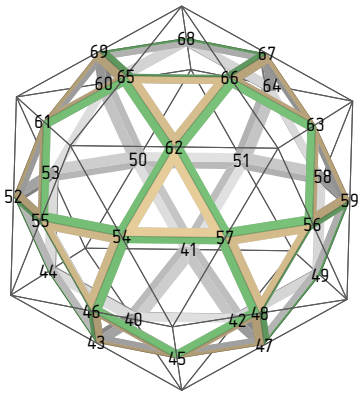
Икосододекаэдр



40 = (0, α, −β);
41 = (1/2, γ, −α);
42 = (1/2, δ, −β);
43 = (−1/2, δ, −β);
44 = (−1/2, γ, −α);
45 = (−ε, −β/2, −β);
46 = (−ζ, −α/2, −α);
47 = (ε, −β/2, −β);
48 = (0, −β, −α);
49 = (ζ, −α/2, −α);
50 = (ε, η, 0);
51 = (ζ, ϑ, 0);
52 = (−ζ, ϑ, 0);
53 = (−ε, η, 0);
54 = (−ζ, −ϑ, 0);
55 = (−1, 0, 0);
56 = (ε, −η, 0);
57 = (−ε, −η, 0);
58 = (1, 0, 0);
59 = (ζ, −ϑ, 0);
60 = (0, β, α);
61 = (−ζ, α/2, α);
62 = (−1/2, −γ, α);
63 = (1/2, −γ, α);
64 = (ζ, α/2, α);
65 = (−1/2, −δ, β);
66 = (0, −α, β);
67 = (1/2, −δ, β);
68 = (ε, β/2, β);
69 = (−ε, β/2, β);

α = sqrt(2/(5+sqrt(5)));
β = sqrt(2/(5−sqrt(5)));
γ = 1/(2sqrt(5−2sqrt(5)));
δ = 1/(2sqrt(5+2sqrt(5)));
ε = (sqrt(5)−1)/4;
ζ = (sqrt(5)+1)/4;
η = β sqrt(5)/2;
ϑ = α sqrt(5)/2;

40, 41, 42;
43, 44, 40;
45, 46, 43;
47, 48, 45;
42, 49, 47;
41, 50, 51;
44, 52, 53;
46, 54, 55;
48, 56, 57;
49, 58, 59;
53, 60, 50;
55, 61, 52;
57, 62, 54;
59, 63, 56;
51, 64, 58;
65, 62, 66;
66, 63, 67;
67, 64, 68;
68, 60, 69;
69, 61, 65;
42, 47, 45, 43, 40;
41, 40, 44, 53, 50;
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46, 45, 48, 57, 54;
47, 49, 59, 56, 48;
42, 41, 51, 58, 49;
50, 60, 68, 64, 51;
53, 52, 61, 69, 60;
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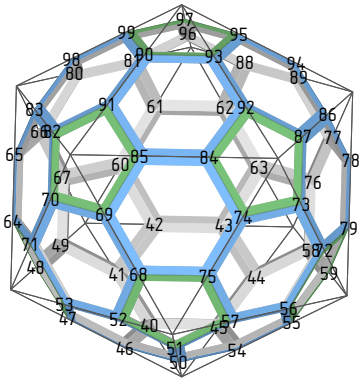
Усечённый икосаэдр



40 = (0, 2α, −β);
41 = (0, 4α, −γ);
42 = (δ, ξ, −3α);
43 = (2δ, 2ϰ, −3α);
44 = (2δ, 2ι, −γ);
45 = (δ, ι, −β);
46 = (−δ, ι, −β);
47 = (−2δ, 2ι, −γ);
48 = (−2δ, 2ϰ, −3α);
49 = (−δ, ξ, −3α);
50 = (−ε, −ϰ, −β);
51 = (−2ε, −2ϰ, −γ);
52 = (−ζ, −λ, −3α);
53 = (−η, −ϑ, −3α);
54 = (ε, −ϰ, −β);
55 = (2ε, −2ϰ, −γ);
56 = (ε, −3ϰ, −3α);
57 = (−ε, −3ϰ, −3α);
58 = (η, −ϑ, −3α);
59 = (ζ, −λ, −3α);
60 = (ε, ο, −α);
61 = (2ε, 2λ, α);
62 = (ζ, ν, α);
63 = (η, μ, −α);
64 = (−η, μ, −α);
65 = (−ζ, ν, α);
66 = (−2ε, 2λ, α);
67 = (−ε, ο, −α);
68 = (−ζ, −ν, −α);
69 = (−η, −μ, α);
70 = (−3δ, −ι, α);
71 = (−3δ, ι, −α);
72 = (2ε, −2λ, −α);
73 = (ε, −ο, α);
74 = (−ε, −ο, α);
75 = (−2ε, −2λ, −α);
76 = (3δ, ι, −α);
77 = (3δ, −ι, α);
78 = (η, −μ, α);
79 = (ζ, −ν, −α);
80 = (−ε, 3ϰ, 3α);
81 = (ε, 3ϰ, 3α);
82 = (−η, ϑ, 3α);
83 = (−ζ, λ, 3α);
84 = (−δ, −ξ, 3α);
85 = (−2δ, −2ϰ, 3α);
86 = (2δ, −2ϰ, 3α);
87 = (δ, −ξ, 3α);
88 = (ζ, λ, 3α);
89 = (η, ϑ, 3α);
90 = (−δ, −ι, β);
91 = (−2δ, −2ι, γ);
92 = (0, −4α, γ);
93 = (0, −2α, β);
94 = (2δ, −2ι, γ);
95 = (δ, −ι, β);
96 = (2ε, 2ϰ, γ);
97 = (ε, ϰ, β);
98 = (−2ε, 2ϰ, γ);
99 = (−ε, ϰ, β);

α = 1/sqrt(25+4sqrt(5));
β = 19/sqrt(445−16sqrt(5));
γ = 1/sqrt(145−64sqrt(5));
δ = sqrt(2/(21−sqrt(5)));
ε = sqrt(2/(29+9sqrt(5)));
ζ = δ sqrt(5);
η = sqrt(2/(81−35sqrt(5)));
ϑ = sqrt(2/(235+103sqrt(5)));
ι = sqrt(2/(95+37sqrt(5)));
ϰ = sqrt(2/(55−13sqrt(5)));
λ = sqrt(2/(115−47sqrt(5)));
μ = 11sqrt(2/(635+167sqrt(5)));
ν = 11sqrt(2/(515+17sqrt(5)));
ξ = 11sqrt(2/(535−67sqrt(5)));
ο = 19sqrt(2/(895−53sqrt(5)));

40, 41, 42, 43, 44, 45;
46, 47, 48, 49, 41, 40;
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71, 70, 82, 83, 65, 64;
75, 74, 84, 85, 69, 68;
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93, 92, 87, 86, 94, 95;
95, 94, 89, 88, 96, 97;
97, 96, 81, 80, 98, 99;
99, 98, 83, 82, 91, 90;
45, 54, 50, 46, 40;
42, 41, 49, 67, 60;
64, 48, 47, 53, 71;
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61, 81, 96, 88, 62;
66, 65, 83, 98, 80;
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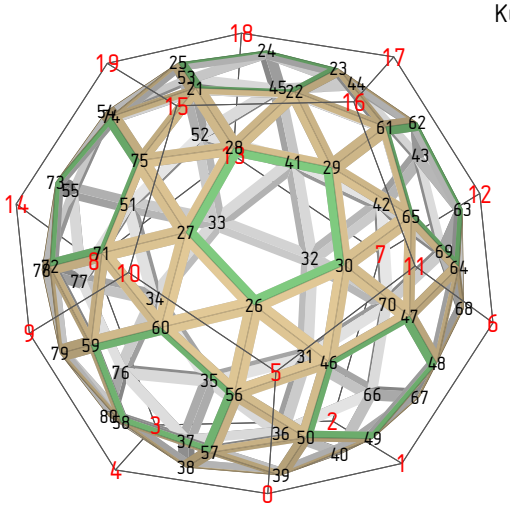
74, 73, 87, 92, 84;
78, 77, 89, 94, 86;
97, 99, 90, 93, 95;

Курносый додекаэдр (координаты не нормированы!)



21 = Ω(16, 15, 19); 51 = Ω(14, 8, 13);
22 = Ω(17, 16, 15); 52 = Ω(8, 13, 18);
23 = Ω(18, 17, 16); 53 = Ω(13, 18, 19);
24 = Ω(19, 18, 17); 54 = Ω(18, 19, 14);
25 = Ω(15, 19, 18); 55 = Ω(19, 14, 8);
26 = Ω(11, 5, 10); 56 = Ω(10, 5, 0);
27 = Ω(5, 10, 15); 57 = Ω(5, 0, 4);
28 = Ω(10, 15, 16); 58 = Ω(0, 4, 9);
29 = Ω(15, 16, 11); 59 = Ω(4, 9, 10);
30 = Ω(16, 11, 5); 60 = Ω(9, 10, 5);
31 = Ω(3, 2, 7); 61 = Ω(11, 16, 17);
32 = Ω(2, 7, 13); 62 = Ω(16, 17, 12);
33 = Ω(7, 13, 8); 63 = Ω(17, 12, 6);
34 = Ω(13, 8, 3); 64 = Ω(12, 6, 11);
35 = Ω(8, 3, 2); 65 = Ω(6, 11, 16);
36 = Ω(1, 2, 3); 66 = Ω(7, 2, 1);
37 = Ω(2, 3, 4); 67 = Ω(2, 1, 6);
38 = Ω(3, 4, 0); 68 = Ω(1, 6, 12);
39 = Ω(4, 0, 1); 69 = Ω(6, 12, 7);
40 = Ω(0, 1, 2); 70 = Ω(12, 7, 2);
41 = Ω(18, 13, 7); 71 = Ω(15, 10, 9);
42 = Ω(13, 7, 12); 72 = Ω(10, 9, 14);
43 = Ω(7, 12, 17); 73 = Ω(9, 14, 19);
44 = Ω(12, 17, 18); 74 = Ω(14, 19, 15);
45 = Ω(17, 18, 13); 75 = Ω(19, 15, 10);
46 = Ω(0, 5, 11); 76 = Ω(4, 3, 8);
47 = Ω(5, 11, 6); 77 = Ω(3, 8, 14);
48 = Ω(11, 6, 1); 78 = Ω(8, 14, 9);
49 = Ω(6, 1, 0); 79 = Ω(14, 9, 4);
50 = Ω(1, 0, 5); 80 = Ω(9, 4, 3);

33, 52, 41;	21, 75, 28;	43, 44, 62;	59, 60, 71;	75, 71, 27;	35, 34, 33, 32, 31;
34, 77, 51;	71, 60, 27;	44, 45, 24;	60, 56, 26;	76, 77, 34;	40, 39, 38, 37, 36;
35, 37, 76;	26, 56, 46;	45, 41, 52;	61, 62, 23;	77, 78, 55;	45, 44, 43, 42, 41;
31, 66, 36;	47, 65, 30;	46, 47, 30;	62, 63, 43;	78, 79, 72;	50, 49, 48, 47, 46;
32, 42, 70;	31, 32, 70;	47, 48, 64;	63, 64, 68;	79, 80, 58;	55, 54, 53, 52, 51;
45, 53, 24;	32, 33, 41;	48, 49, 67;	64, 65, 47;	80, 76, 37;	60, 59, 58, 57, 56;
25, 54, 74;	33, 34, 51;	49, 50, 39;	65, 61, 29;	22, 21, 28;	65, 64, 63, 62, 61;
55, 78, 73;	34, 35, 76;	50, 46, 56;	66, 67, 40;	23, 22, 61;	70, 69, 68, 67, 66;
79, 59, 72;	35, 31, 36;	51, 52, 33;	67, 68, 48;	24, 23, 44;	75, 74, 73, 72, 71;
38, 58, 80;	36, 37, 35;	52, 53, 45;	68, 69, 63;	25, 24, 53;	80, 79, 78, 77, 76;
39, 50, 57;	37, 38, 80;	53, 54, 25;	69, 70, 42;	21, 25, 74;	21, 22, 23, 24, 25;
67, 49, 40;	38, 39, 57;	54, 55, 73;	70, 66, 31;	26, 27, 60;	30, 29, 28, 27, 26;
64, 48, 68;	39, 40, 49;	55, 51, 77;	71, 72, 59;	27, 28, 75;	
43, 63, 69;	40, 36, 66;	56, 57, 50;	72, 73, 78;	28, 29, 22;	
23, 62, 44;	41, 42, 32;	57, 58, 38;	73, 74, 54;	29, 30, 65;	
22, 29, 61;	42, 43, 69;	58, 59, 79;	74, 75, 21;	30, 26, 46;	

α = (curt(30472+9388sqrt(5)+132sqrt(68697+31080sqrt(5)))+curt(30472+9388sqrt(5)−132sqrt(68697+31080sqrt(5)))+19−13sqrt(5))/66;
β = (16−7sqrt(5))(11α(3+sqrt(5))+22α^2(2+sqrt(5))−13−5sqrt(5))/22;
(γ_0, δ_0, ε_0) . . (γ_{19}, δ_{19}, ε_{19}) – координаты вершин додекаэдра (см. стр. 1);
$\Omega(\chi, \psi, \omega) = (\alpha\gamma_\chi+\gamma_\psi+\beta\gamma_\omega, \alpha\delta_\chi+\delta_\psi+\beta\delta_\omega, \alpha\varepsilon_\chi+\varepsilon_\psi+\beta\varepsilon_\omega)$;