

1) Jednoduchá krychle (8 vrcholů)

$$\begin{array}{ccccccc} 1, & 1, & 1 & 1 & 1 & (-1) & -1 & -1 & (1) & -1 & -1 & -1 \\ & & & 1 & (-1) & 1 & -1 & (1) & -1 & & & \\ & & (-1) & 1 & 1 & (1) & -1 & -1 & & & & \end{array}$$

2) Dodekaedr (20 vrcholů) = 8 + 12 \rightarrow $f = \frac{1+\sqrt{5}}{2}$

$0, f, \frac{1}{f}$	$\frac{1}{f}, 0, f$	$f, \frac{1}{f}, 0$
$0, f, -\frac{1}{f}$	$\frac{1}{f}, 0, -f$	$f, -\frac{1}{f}, 0$
$0, -f, \frac{1}{f}$	$-\frac{1}{f}, 0, f$	$-f, \frac{1}{f}, 0$
$0, -f, -\frac{1}{f}$	$-\frac{1}{f}, 0, -f$	$-f, -\frac{1}{f}, 0$

3) Ikosáedr v dodekaědu (12 vrcholů) = (12stě stěn dodekaědu)

$a = \frac{f+2}{5} \approx 0,7236$
 $A = \frac{3f+1}{5} \approx 1,1708$

$0, a, A$	$A, 0, a$	$a, A, 0$
$0, a, -A$	$A, 0, -a$	$a, -A, 0$
$0, -a, A$	$-A, 0, a$	$-a, A, 0$
$0, -a, -A$	$-A, 0, -a$	$-a, -A, 0$

4) Ikosáedr opsaný dodekaědu

$b = \frac{3(f+2)}{4f+3} \approx 1,1459$

$B = \frac{3(3f+1)}{4f+3} \approx 1,8541$

$0, b, B$	$B, 0, b$	$b, B, 0$
$0, b, -B$	$B, 0, -b$	$b, -B, 0$
$0, -b, B$	$-B, 0, b$	$-b, B, 0$
$0, -b, -B$	$-B, 0, -b$	$-b, -B, 0$