Exercícios

01- 12 lados $a_e = \frac{360^\circ}{12} = 30^\circ$ $a_i = \frac{180^\circ(12-2)}{12}$

$a_e = 30^\circ$

$a_i = 150^\circ$

$a_i = \frac{1800}{12} = 150^\circ$

02- 20 lados $S_i = 180^\circ(20-2) = 3240^\circ$

$S_i = 3240^\circ$

03- $a_i = \frac{S_i}{n}$ $S_i = 180(n-2)$ ⇒ Logo: $a_i = \frac{180^\circ(n-2)}{n}$

04- $(180^\circ(n-2)) - (5 \cdot 360^\circ)$

$180n - 360 - 1800$

$180n = 1800 + 360$

$n = \frac{2160}{180}$

$n = 12$ ⇒ dodecágono

05- $n = 2d$ $\quad d = \frac{n \cdot (n-3)}{2}$

$d = \frac{2d \cdot (2d-3)}{2}$

$2d = 4d^2 - 6d \;:2$

$d = 2d^2 - 3d$

$2d^2 - 4d = 0$

$\Delta = 16 - 4 \cdot 2 \cdot 0$

$\Delta = 16$

$d_1 = \frac{4+4}{4} = 2$

$d_2 = \frac{4-4}{4} = 0$

$n = 2d$

$n = 2 \cdot 2$

$n = 4$

06- $180^\circ(n-2) = 3.360$

$180n - 360 = 1080$

$180n = 1440$

$n = \frac{1440}{180} = 8 \Rightarrow$ octógono

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