Tarefa Básica

① 12 lados

$a_e = \frac{360^\circ}{12} = 30^\circ$

$S_i = 180^\circ (12-2)$

$S_i = 1800^\circ$

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

② 20 lados

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

$S_i = 180^\circ . 18 = 3240^\circ$

③ $a_i = \frac{S_i}{n} \Rightarrow a_i = \frac{180^\circ (n-2)}{n}$

④ $5 S_e = S_i$

$5 . 360^\circ = S_i$

$1800^\circ = S_i$

$1800^\circ = 180^\circ (n-2)$

$n-2 = \frac{1800^\circ}{180^\circ}$

$n-2 = 10$

$n = 12$ (dodecágono)

⑤ $n = 2d$

$n = 2\left(\frac{n(n-3)}{2}\right)$

$n = \frac{2n(n-3)}{2}$

$2n = 2n(n-3)$

$2n = 2n^2 - 6n$

$-2n^2 + 8n = 0$

$n(-2n + 8) = 0$

$n \neq 0$ ←

$-2n = -8$

$n = 4$

⑥ $a_i = 3a_e$

$\frac{Si}{n} = \frac{3 \cdot 360°}{n}$

$\frac{180°(n-2)}{n} = \frac{1080°}{n}$

$n - 2 = \frac{1080°}{180°}$

$n - 2 = 6$

$n = 8$ → octógono

Alternativa ©