

① DODECÁGONO = 12 LADOS

$$\hat{A}_e = \frac{360^\circ}{n}$$

$$\hat{A}_i = \frac{(n-2) \cdot 180^\circ}{n}$$

$$\hat{A}_e = \frac{360^\circ}{12} = 30^\circ$$

$$\hat{A}_i = \frac{(12-2) \cdot 180^\circ}{12}$$

$$\hat{A}_i = \frac{10 \cdot 180^\circ}{12}$$

$$\begin{array}{r} 1800^\circ \\ 12 \overline{) 1800} \\ \underline{12} \\ 060 \\ \underline{60} \\ 00 \\ \text{---} \end{array}$$

$$\hat{A}_i = \frac{1800^\circ}{12} = 150^\circ$$

$R: \hat{A}_e = 30^\circ, \hat{A}_i = 150^\circ$

② ICOSÁGONO = 20 LADOS

$$S_i = (n-2) \cdot 180^\circ$$

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

$$S_i = 18 \cdot 180^\circ$$

$$S_i = 3240^\circ$$

$$\begin{array}{r} 6 \\ \times 180^\circ \\ \times 18 \\ \hline 1440 \\ 1800 + \\ \hline 3240^\circ \end{array}$$

③ Dado que, $S_i = 180^\circ \cdot (n-2)$, temos:

$$\hat{A}_i = \frac{180^\circ \cdot (n-2)}{n}$$

④ $5 \cdot S_e = S_i$

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

$$\begin{array}{r} 3 \\ 360^\circ \\ \times 5 \\ \hline 1800^\circ \end{array}$$

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

$$\frac{1800^\circ}{\cancel{180^\circ}} = \frac{180^\circ \cdot (n-2)}{\cancel{180^\circ}}$$

$$10 = n-2$$

$$10 + 2 = n \text{ lados}$$

$$n = 12 \text{ lados}$$

R: DODECÁGONO

⑤

$$n = 2d$$

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

$$\frac{n}{2} = d$$

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

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

$$n = \overbrace{n(n-3)}$$

R: 4 Lader

$$n = n^2 - 3n \quad \cdot (2)$$

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

$$2n + 6n = 2n^2$$

$$8n = 2n^2$$

$$8n = 2n \cdot n$$

$$\frac{8n}{2n} = n$$

$$n = 4$$

$$\textcircled{c} \quad \hat{A}_e = \frac{360^\circ}{n}$$

$$\hat{A}_i = 3 \cdot \hat{A}_e$$

$$\hat{A}_i = 3 \cdot \frac{360^\circ}{n}$$

$$\begin{array}{r} 1 \\ 360^\circ \\ \times 3 \\ \hline 1080^\circ \end{array}$$

$$\hat{A}_i = \frac{1080^\circ}{n}$$

$$\hat{A}_i = \frac{(n-2) \cdot 180^\circ}{n}$$

$$\frac{(n-2) \cdot 180^\circ}{n} = \frac{1080^\circ}{n}$$

$$(n-2) \cdot 180^\circ = 1080^\circ$$

$$\frac{(n-2) \cdot 180^\circ}{180^\circ} = \frac{1080^\circ}{180^\circ}$$

$$\begin{array}{r} 1080^\circ \overline{) 180^\circ} \\ - 1080^\circ \\ \hline 0000 \end{array}$$

$$\frac{(n-2) \cdot \cancel{180^\circ}}{\cancel{180^\circ}} = 6$$

$$n-2 = 6$$

$$n = 6 + 2$$

$$n = 8 \text{ lados}$$

R: (c) OCTÓGONO