tarefa básica

POLÍGONOS

① dodecágono regular = 12 lados → n

ângulo externo → $\frac{360^\circ}{n}$

ângulo interno → $\frac{(n-2).180^\circ}{n}$

- $\hat{a}e = \frac{360^\circ}{12} = 30^\circ$

- $\hat{a}i = \frac{(12-2).180^\circ}{12} = \frac{10.180^\circ}{12}$

$\hat{a}i = \frac{1800}{12} = 150^\circ$

(2) icoságono convexo = 20 lados → n

Soma dos ângulos internos do polígono convexo → $(n-2).180°$

- $Si = (20-2).180 = 18.180° = 3240°$

(3) polígono equiângulo = lados internos congruentes

$$\hat{a}i = \frac{(n-2).180°}{n}$$

$$\hat{a}i = \frac{180°.(n-2)}{n}$$

④ Se = 360°
Si = (n-2).180°

$5.360° = (n-2).180°$

$1800° = 180n - 360°$

$1800° + 360° = 180n$

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

$n = 12$ → dodecágono

⑤ $n = 2d$

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

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

$$d = \frac{4d^2 - 6d}{2}$$

$$2d = 4d^2 - 6d$$

$$4d^2 - 6d - 2d = 0$$

$$4d^2 - 8d = 0$$

$d(4d-8) = 0$

$d = 0$ ou $4d - 8 = 0$

$4d = 8$

$d = \frac{8}{4}$

$d = 2$

$n = 2d$

$n = 2.2 = 4$

(6) $\hat{a}i = 3.\hat{a}e$

$\hat{a}e = \frac{360°}{n}$

$\frac{180°.(n-2)}{n} = \frac{3.(360°)}{n}$

$180n - 360° = 1080°$

$180n = 1080 + 360°$

$n = \frac{1440}{180}$

$n = 8$

octógono → Alternativa c)