

## Tarefa Básica - Polígonos

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①  $a_i = ?$ ,  $a_e = ?$ , dodecágono = 12 lados  
 $n = 12$

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

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

$$S_i = 180^\circ \cdot 10 = 1800$$

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

$$a_e + a_i = 180^\circ$$

$$a_e + 150^\circ = 180^\circ \rightarrow a_e = 180^\circ - 150^\circ = \boxed{30^\circ}$$

②  $S_i = ?$ , icoságono = 20 lados  $\rightarrow n = 20$

$$S_i = 180^\circ(20-2) \rightarrow S_i = 180^\circ \cdot 18 = \boxed{3240^\circ}$$

③  $a_i = ?$ , polígono equiângulo = ângulos internos congruentes

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



④  $S_i = 5. S_i$   
 $180^\circ \cdot (n-2) = 5. 360^\circ$   
 $n-2 = \frac{5. 360^\circ}{180^\circ : 9}$   
 $n-2 = \frac{5. 2}{2}$

→ emitted poligono  
 $S_e e' = 360^\circ$   
 $n = 10 + 2$   
 $n = 12$  lados  
 $\Rightarrow$  dodecágono

⑤  $n = 2. d \rightarrow n^\circ$  de diagonais  
 $n = 2. \frac{n(n-3)}{2}$   
 $n = n^2 - 3n$   
 $n^2 - 3n - n = 0$

$n^2 - 4n = 0$   
 $n(n-4) = 0$   
 $n=0 \quad \left\{ \begin{array}{l} n-4=0 \\ \underline{n=4} \end{array} \right.$

⑥  $a_i = 3 a_e$   
 $\frac{S_i}{n} = 3. \frac{360^\circ}{n}$

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

$180n - 360 = 3. \frac{360}{n} \cdot n$

$180n = 1080 + 360$

$n = \frac{1440}{180} = \underline{8}$

$=$  octógono

alternative (C)