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## Potência de Pontos

①  $\underbrace{AB - AB}_{2 \cdot 8 \text{ cm}} = \underbrace{AC = AD}_x \quad AD = (AC + CD)$

$$8^2 = x(x+x)$$

$$x = \sqrt{32}$$

$$\begin{array}{r|l} 32 & 2 \\ \cdot 16 & 2 \end{array}$$

$$\begin{array}{r|l} 8 & 2 \end{array}$$

$$\begin{array}{r|l} 4 & 2 \end{array}$$

$$\begin{array}{r|l} 2 & 2 \end{array}$$

$$1$$

$$64 = x \cdot 2 \cdot x \quad 64 = 2 \cdot x^2 \quad 32 = x^2$$

$$x = 4\sqrt{2} \text{ (E)}$$

②  $PA = 3PC$

$$PB/PA = PA/PC \rightarrow PA^2 = PB \cdot PC$$

$$(3PC)^2 = PB \cdot PC$$

$$9PC^2 = PB \cdot PC$$

$$9PC = PB$$

$$PB = 9PC \text{ (B)}$$

③  $6 \cdot 6 = x \cdot (5+x) \quad 6^2 = x(5+x) \quad x^2 + 5x - 36 = 0$

$$\Delta = 25 - 4 \cdot 1 = -36$$

$$\Delta = 25 + 144 = 169$$

$$x = \frac{-5 \pm \sqrt{169}}{2 \cdot 1}$$

$$\frac{-5 \pm 13}{2}$$

$$\frac{8}{2} = 4 \quad \frac{-18}{2} = -9$$

$$\text{(E)}$$

④  $IE \cdot EB = CE \cdot ED$

$$CE = ED$$

$$3 = CE^2$$

$$CE = \sqrt{3}$$

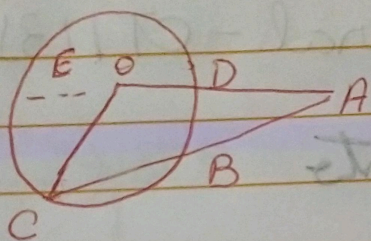
$$CD = 2CE$$

$$CD = 2\sqrt{3}$$

$$\text{(B)}$$



5



$$AE \cdot AD = AC \cdot AB$$

$$(4 + 2r) \cdot 4 = 18 \cdot 8 \quad 16 + 8R = 144$$

$$8r = 128 \quad R = 16$$

$$16 + 18 + 20 = 54 \quad (E)$$