Potência de um ponto

1) $AB^2 = AC \cdot CB$

$AB = 8$

$AC = CD = x$

$AD = (AC + AD)$

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

$64 = 2x^2$

$x^2 = 32$

$x = \sqrt{32}$

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

32	2
16	2
8	2
4	2
2	1

2) $PA = 3PC$

$\frac{PB}{PA} = \frac{PA}{PC}$ $\quad PA^2 = PB \cdot PC$

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

$9PC^2 = PB\,PC$

$9PC = PB$ (B)

3) $x(5+x) = 6^2$

$5x + x^2 = 36$

$x^2 + 5x - 36 = 0$

$-9 + 4 = -5 \quad -b/a$

$-9 \cdot 4 = -36 \quad c/a \qquad x = 4$

(E)

4)

$AE \cdot EB = 3$

$CE = ED$

$CE \cdot ED = AE \cdot EB = 3$

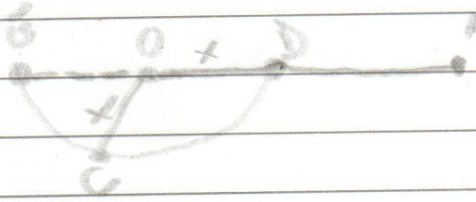
$CE^2 = 3$

$CE = \sqrt{3}$

$CD = CE + ED$

$CD = 2\sqrt{3}$ (B)

5) $m\hat{A}OB = x$



$AD \cdot AE = AB \cdot AC$

$4(4+2x) = 8 \cdot 18$

$16 + 8x = 144$

$8x = 128$

$x = 16$

$AC = 18$

$CO = 16$

$BA = 20$

$P = 54$ (E)