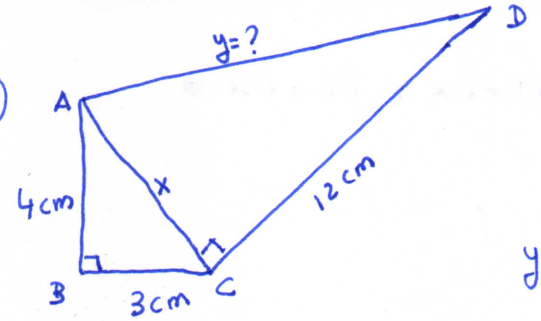
① 

$x^2 = 4^2 + 3^2 = 16 + 9 = 25$

$x = \sqrt{25} = 5\text{cm}.$

$y^2 = 12^2 + 5^2 = 144 + 25 = 169$

$y = \sqrt{169} = \boxed{13\text{cm}}$

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② Figura 1: $A = \pi R^2 = \pi \cdot 2^2 = 4\pi\ m^2$

Figura 2: $A = 4 \cdot \pi R^2 = 4 \cdot \pi \cdot 1^2 = 4\pi\ m^2$] Son iguais

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③ $c^2 = a^2 + b^2 = 6^2 + 8^2 = 36 + 64 = 100$

$c = \sqrt{100} = 10\text{m} \Rightarrow$ Radio da circunferencia é: $R = \frac{10}{2} = 5\text{m}.$

Longitude da circunferencia:

$L = 2\pi \cdot R = 10\pi = \boxed{31{,}4\text{m}.}$

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④ $A_{círculo} = \pi \cdot R^2 = \pi \cdot (10^{-4})^2 = \pi \cdot 10^{-8}\ m^2$

$A_{cadrado} = l^2 = (2 \cdot 10^{-4})^2 = 4 \cdot 10^{-8}\ m^2$]

$A_{cadrado} - A_{círculo} = 4 \cdot 10^{-8} - \pi \cdot 10^{-8} = \boxed{(4 - \pi) \cdot 10^{-8}\ m^2}$

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⑤ Como son semellantes: $\frac{h}{8} = \frac{2}{h} \Rightarrow h^2 = 8 \cdot 2 = 16 \Rightarrow h = \sqrt{16} = \boxed{4\text{cm}}$

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⑥ $AB = BC$ porque é isóscele $\Rightarrow$

$AC =$ hip.

$\text{hip}^2 = 5^2 + 5^2 = 50 \Rightarrow \text{hip} = \sqrt{50} = 5\sqrt{2}\ dm$

Como $AC = AE \Rightarrow BE = 5\sqrt{2} - 5 = \boxed{5(\sqrt{2} - 1)\ dm}$

(7) $\frac{8}{6} = \frac{8+x}{13} \Rightarrow 8 \cdot 13 = 6 \cdot (8+x) \Rightarrow 104 = 48 + 6x \Rightarrow 56 = 6x \Rightarrow$

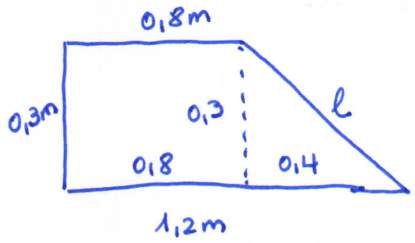
$x = \frac{56}{6} = \frac{28}{3}$ cm $\quad \boxed{x = \frac{56}{6} \text{ cm}}$

(8) 360° — $\pi \cdot 3^2 = 9\pi$

α — $\frac{9}{4}\pi$

$\Rightarrow \alpha = \frac{\frac{9}{4}\pi \cdot 360^\circ}{9\pi} = \frac{360^\circ}{4} = 90^\circ$

(9)



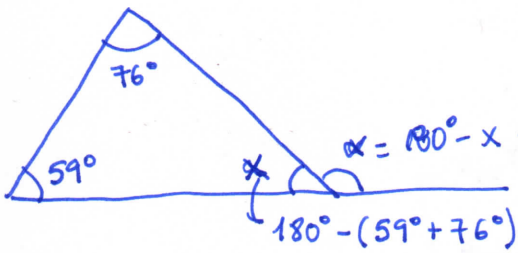
$\ell^2 = 0{,}3^2 + 0{,}4^2 = 0{,}09 + 0{,}16 = 0{,}25$

$\ell = \sqrt{0{,}25} = 0{,}5\text{m}.$

$P = 0{,}5 + 0{,}8 + 0{,}3 + 1{,}2 = 2{,}8\text{m}$

$A = 0{,}8 \cdot 0{,}3 + \frac{0{,}4 \cdot 0{,}3}{2} = 0{,}24 + 0{,}06 = 0{,}30\text{m}^2$

(10) $\alpha = 76^\circ + 59^\circ = \boxed{135^\circ.}$



$\alpha = 180^\circ - x = 180^\circ - (180^\circ - (135^\circ)) = 180^\circ - 180^\circ + 135^\circ$