

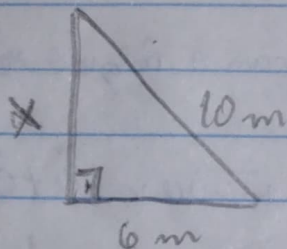
Exercícios

01- $x^2 = (\sqrt{3})^2 + (\sqrt{4})^2$
 $x^2 = 3 + 4$
 $x = \sqrt{7}$

R: A hipotenusa é $\sqrt{7}$

(B)

02-



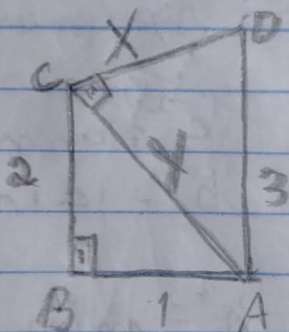
$$10^2 = x^2 + 6^2$$

$$x^2 = 100 - 36$$

$$x = \sqrt{64}$$

$$x = 8m$$

03-



$$y^2 = 2^2 + 1^2$$

$$y = \sqrt{5}$$

(B)

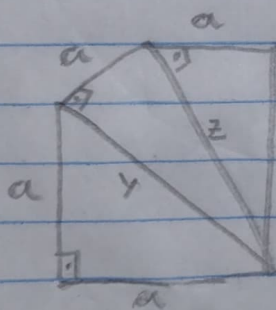
$$3^2 = (\sqrt{5})^2 + x^2$$

$$9 = 5 + x^2$$

$$x = \sqrt{4}$$

$$x = 2$$

04-



$$y^2 = a^2 + a^2$$

$$y^2 = 2a^2$$

$$y = a\sqrt{2}$$

$$z^2 = (a\sqrt{2})^2 + a^2$$

$$z^2 = 2a^2 + a^2$$

$$z = a\sqrt{3}$$

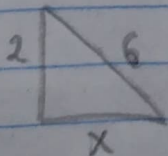
$$x^2 = (a\sqrt{3})^2 + a^2$$

$$x^2 = 3a^2 + a^2$$

$$x = 2a$$

(B)

05-



$$6^2 = x^2 + 2^2$$

$$x^2 = 36 - 4$$

$$x = \sqrt{32}$$

$$x = 4\sqrt{2}$$

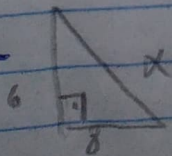
$$A = \frac{b \cdot h}{2}$$

$$A = 4\sqrt{2}$$

$$A = \frac{(4\sqrt{2}) \cdot 2}{2}$$

(C)

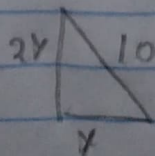
06-



$$x^2 = 6^2 + 8^2$$

$$x^2 = 100$$

$$x = 10$$



$$10^2 = (2y)^2 + y^2$$

$$100 = 5y^2$$

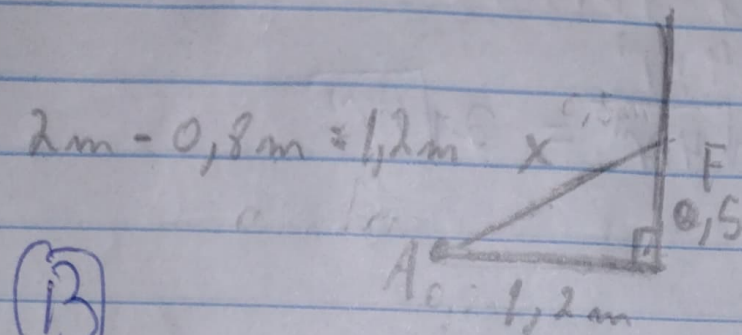
$$y = \sqrt{\frac{100}{5}}$$

$$y = \frac{10}{\sqrt{5}}$$

$$y = 2\sqrt{5}$$

(A)

07 - Aranha 16 cm/s } 5 segundos depois : A = 80 cm
Formiga 10 cm/s } F = 50 cm



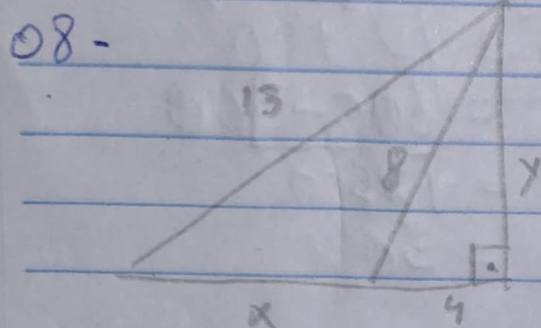
$$X^2 = 0,5^2 + 1,2^2$$

$$X^2 = 0,25 + 1,44$$

$$X = \sqrt{1,69}$$

$$X = 1,3 \text{ m}$$

(B)



$$8^2 = y^2 + 4^2$$

$$y^2 = 64 - 16$$

$$y = \sqrt{48}$$

$$13^2 = (\sqrt{48})^2 + (x+4)^2$$

$$169 = 48 + x^2 + 8x + 16$$

$$x^2 + 8x - 105 = 0$$

$$\Delta = 64 - 4 \cdot 1 \cdot (-105)$$

$$\Delta = 484$$

(D)

$$x_1 = \frac{-8 + 22}{2} = 7 \text{ m}$$

$$x_2 = \frac{-8 - 22}{2} = -15$$

09 - Fórmula de Heron:

$$P = a + b + c / 2$$

$$P = 14 + 15 + 13 / 2$$

$$P = 21$$

$$A = \sqrt{21(21-14)(21-15)(21-13)}$$

$$A = \sqrt{21 \cdot 7 \cdot 6 \cdot 8}$$

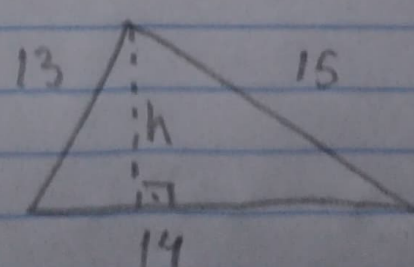
$$A = 84$$

$$A\Delta = \frac{b \cdot h}{2}$$

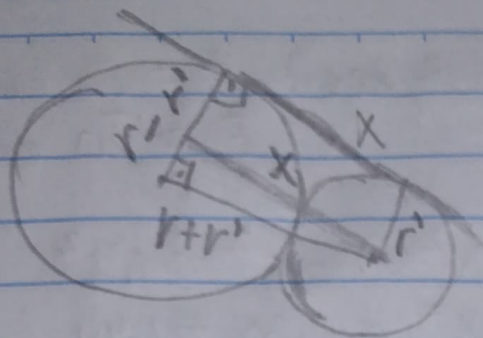
$$84 = \frac{14 \cdot h}{2}$$

$$168 = 14h$$

$$h = 12$$

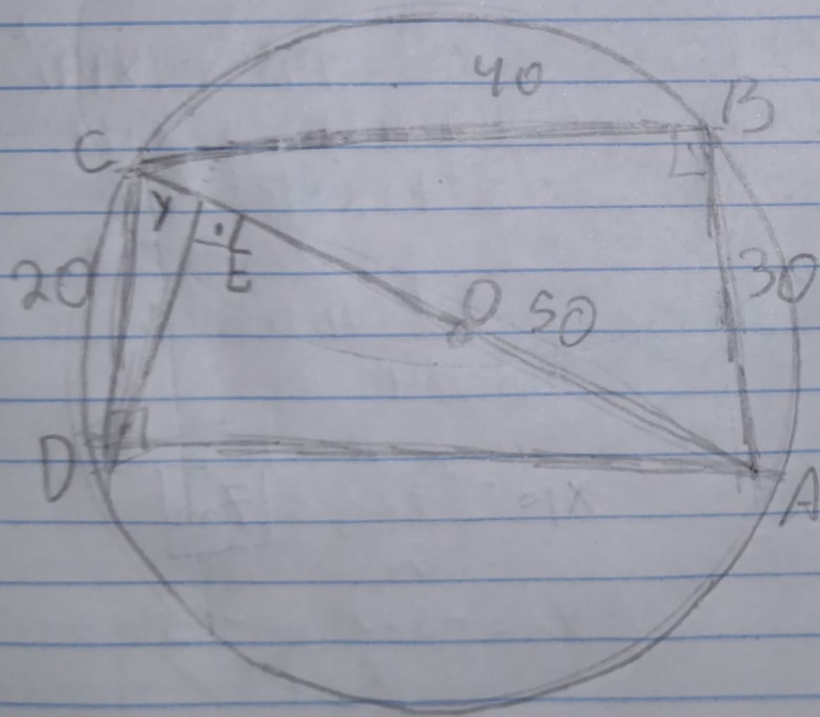


10-



$$\begin{aligned}(r+r')^2 &= (r-r')^2 + x^2 \\ x^2 &= (r+r')^2 - (r-r')^2 \\ x^2 &= r^2 + 2rr' + r'^2 - r^2 + 2r' - r'^2 \\ x^2 &= 4rr' \\ x &= \sqrt{4rr'} = 2\sqrt{rr'}\end{aligned}$$

11-



$$\begin{aligned}\overline{CA}^2 &= 40^2 + 30^2 \\ \overline{CA}^2 &= 1600 + 900 \\ \overline{CA} &= \sqrt{2500} \\ \overline{CA} &= 50\end{aligned}$$

$$\overline{CDA} = \overline{CED} \sim \overline{AA}$$

$$\frac{20}{50} = \frac{y}{20}$$

$$y = \frac{400}{50}$$

$$y = 8$$

