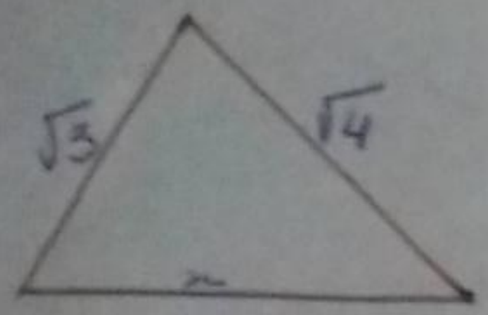
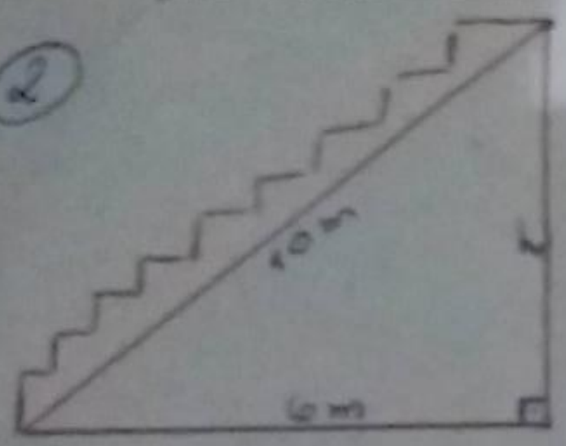
① 

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

$x^2 = 3 + 4$

$x^2 = 7 \rightarrow x = \sqrt{7}$

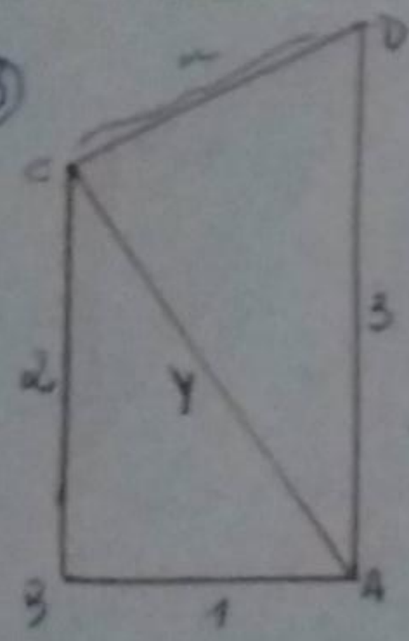
② 

$10^2 = h^2 + 6^2$

$100 = h^2 + 36$

$100 - 36 = h^2$

$64 = h^2 \rightarrow 8$

③ 

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

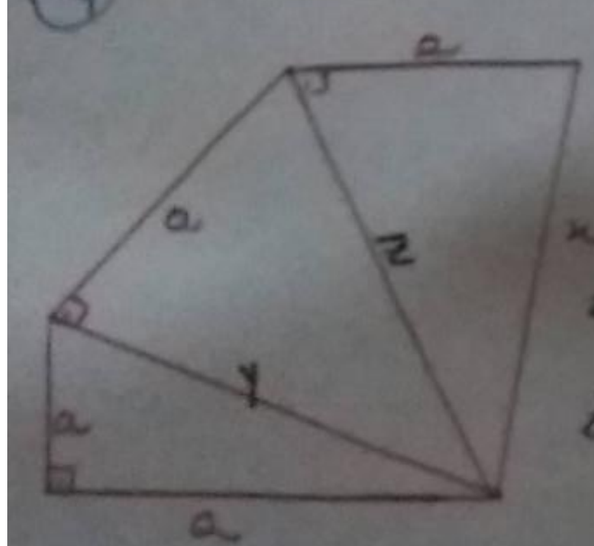
$y^2 = 1 + 4$

$y^2 = 5$

$3^2 = x^2 + y^2$

$9 = x^2 + 5$

$4 = x^2 \rightarrow 2$

④ 

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

$y^2 = 2a^2$

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

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

$z^2 = 3a^2$

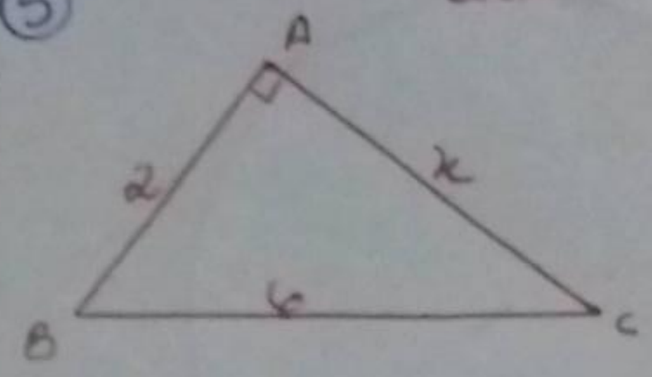
$x^2 = a^2 + z^2$

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

$x^2 = 4a^2$

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

$x = 2a$

⑤ 

área = ?

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

$36 = x^2 + 4$

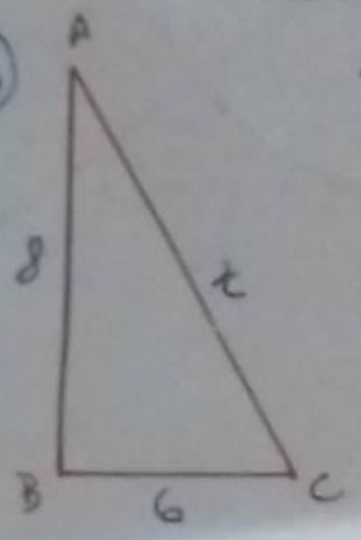
$32 = x^2$

$x = \sqrt{32}$

$\Rightarrow x = \sqrt{2^2 \cdot 2^2 \cdot 2}$

$x = 4\sqrt{2}$

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

⑥ 

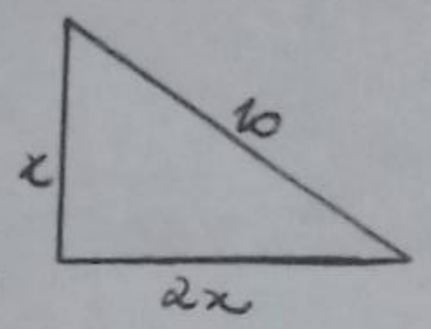
$x^2 = 6^2 + 8^2$

$x^2 = 36 + 64$

$x^2 = 100$

$x = \sqrt{100}$

$x = 10$



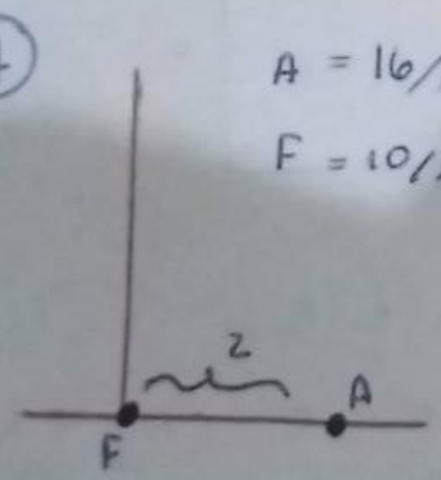
$10^2 = x^2 + (2x)^2$

$100 = x^2 + 4x^2$

$100 = 5x^2$

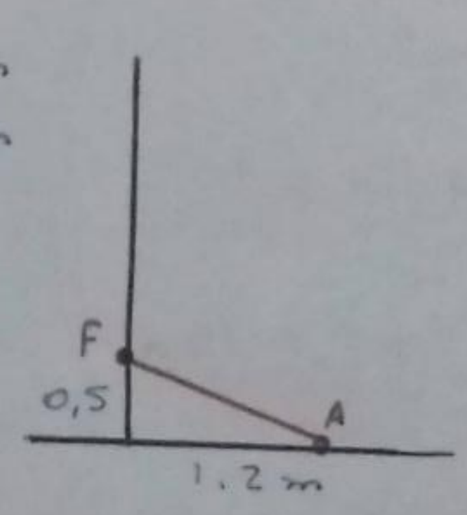
$20 = x^2$

$2\sqrt{5} = x$

⑦ 

$A = 16/3$ $\quad$ $A = 80\,cm$

$F = 10/3 \rightarrow F = 50\,cm$

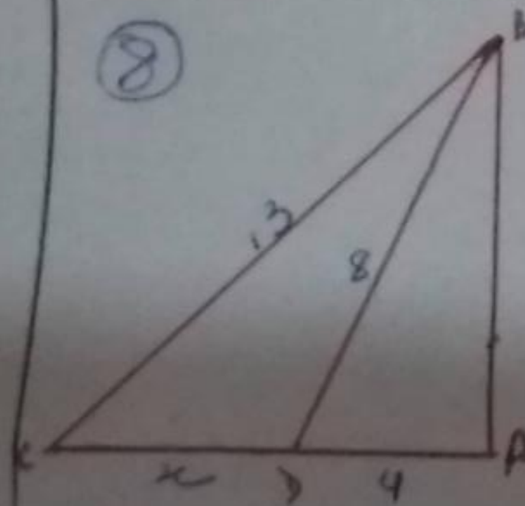


$x^2 = 0,5 + 1,2^2$

$x^2 = 0,25 + 1.44$

$x^2 = 1.69$

$x = 1.3$

⑧ 

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

$64 = y^2 + 16$

$y^2 = 48$

$13^2 = y^2 + (x+4)^2$

$169 = 48 + x^2 + 4x + 4x + 16$

$169 - 64 = x^2 + 8x$

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

$\Delta = 8^2 - 4 \cdot (-105)$

$\Delta = 64 + 420$

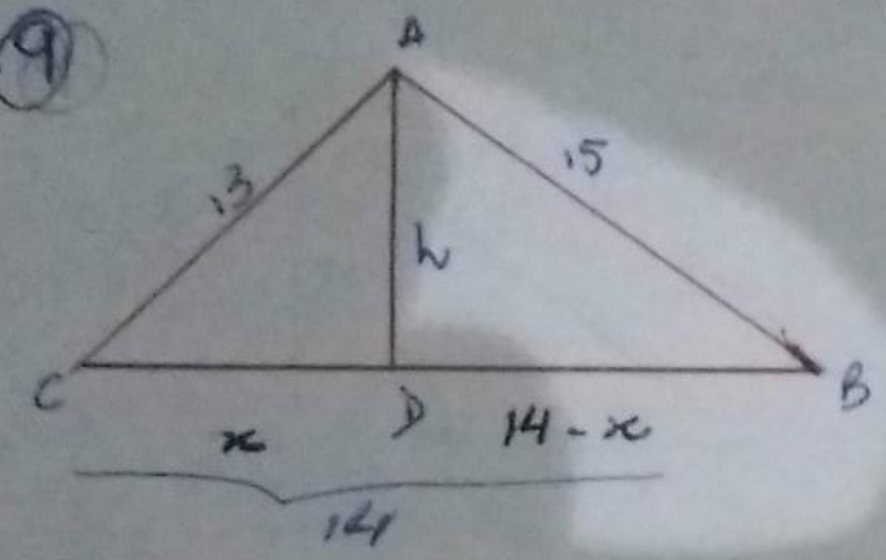
$\Delta = 484 \rightarrow 22$

$\rightarrow x = \frac{-8 \pm 22}{2}$

$x_1 = \frac{-30}{2} = -15$

$x_{11} = \frac{14}{2} = 7$ // (medidas devem ser positivas)

(9)



ΔADB

$h^2 + (14-x)^2 = 15^2$

$h^2 = 15^2 - (14-x)^2$

ΔACD

$h^2 + x^2 = 13^2$

$h^2 = 13^2 - x^2$

$h^2 = h^2$

$15^2 - (14-x)^2 = 13^2 - x^2$

$225 - 196 - 28x - x^2 = 169 - x^2$

$-28x = 169 - 225 + 196$

$-28x = 140$

$x = \frac{140}{28} = 5$

ΔACD

$13^2 = h^2 + 5^2$

$169 = h^2 + 5^2$

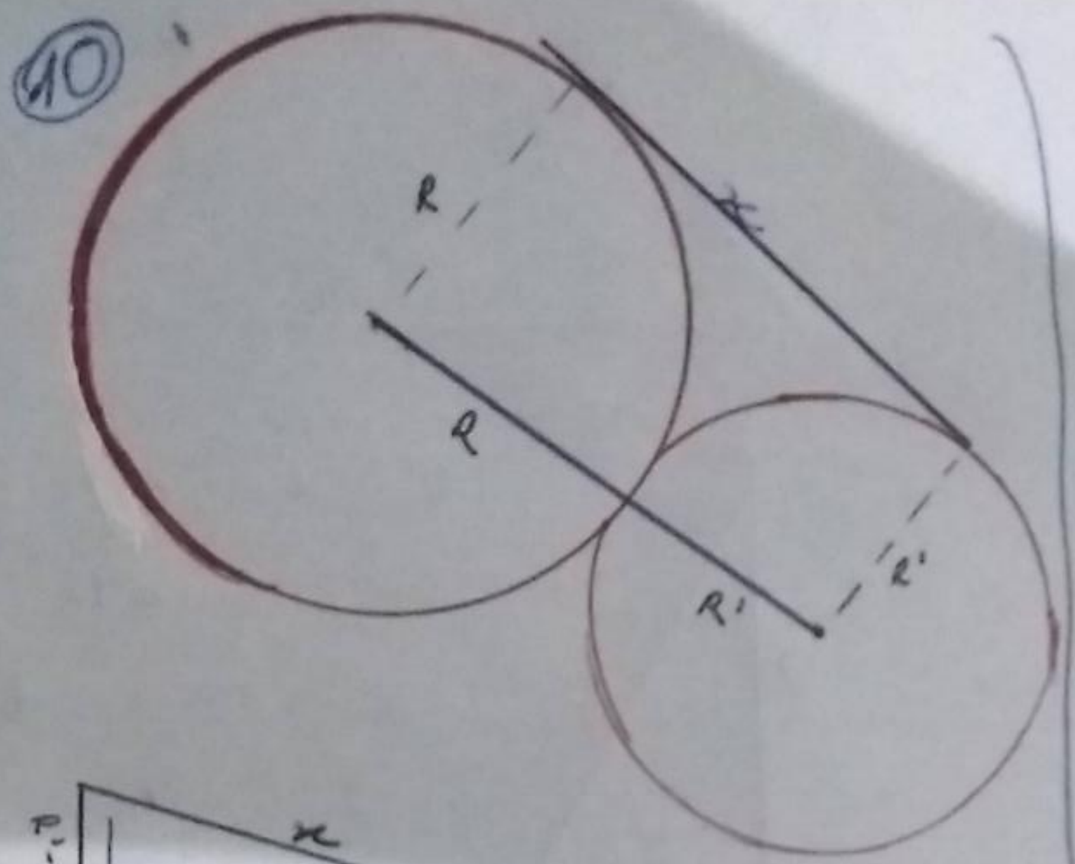
$169 - 25 = h^2$

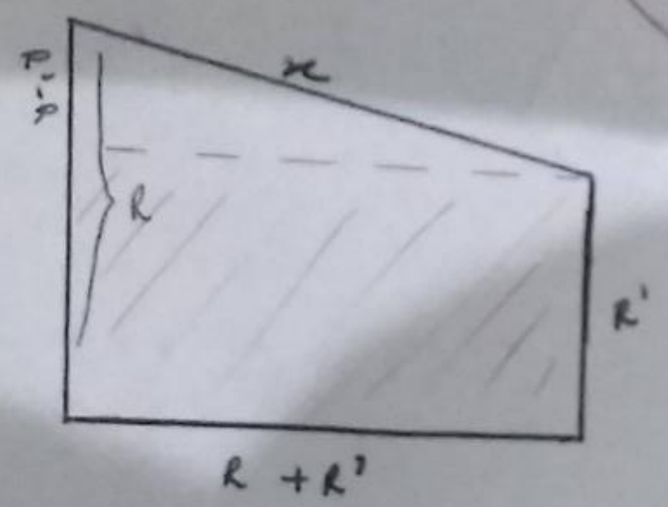
$144 = h^2$

$\sqrt{144} = h$

12

(10)





$x^2 = (R+R')^2 + (R-R')^2$

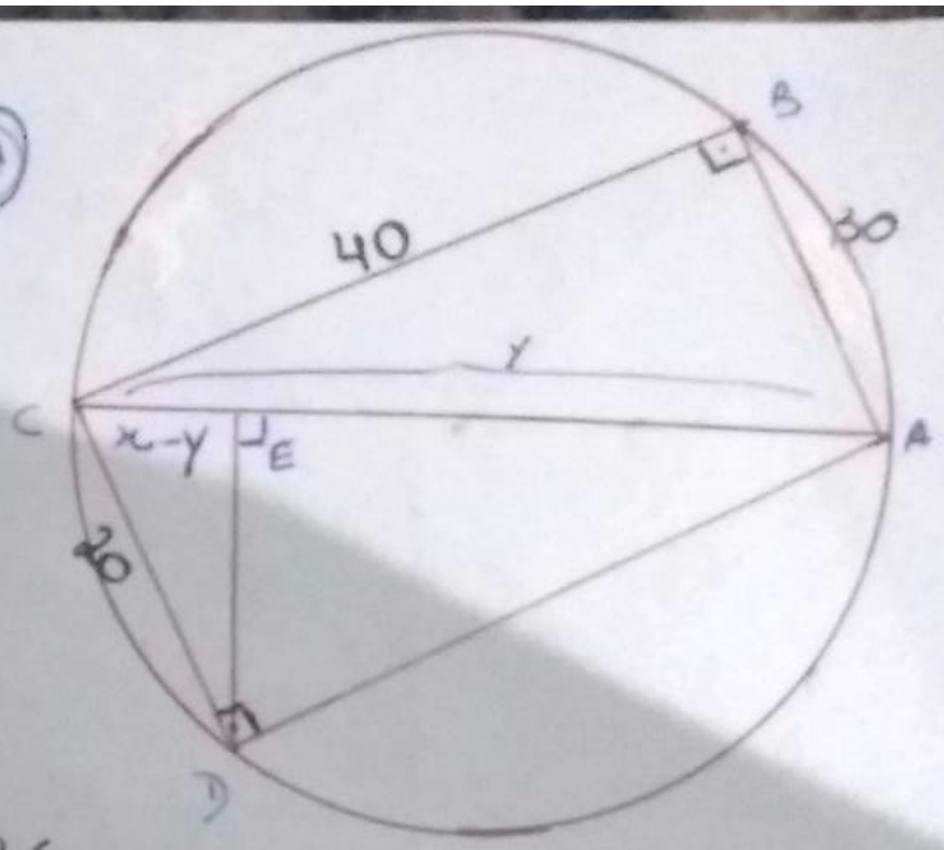
$x^2 = R^2 + 2RR' + R'^2 + R^2 - 2RR' + R'^2$

$x^2 = 2R^2 + 2R'^2$

$x = \sqrt{2R^2 + 2R'^2}$

$x = 2\sqrt{RR'}$

(11)



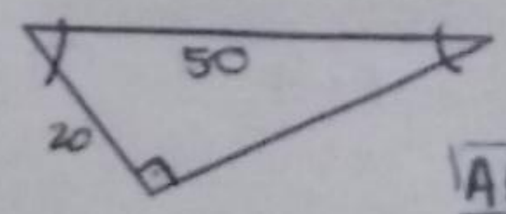
ΔABC

$Y^2 = 30^2 + 40^2$

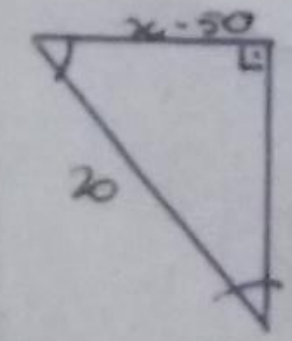
$Y^2 = 900 + 1600$

$Y = \sqrt{2500}$

$Y = 50$



AA ~



$\frac{50}{20} = \frac{20}{x-50}$

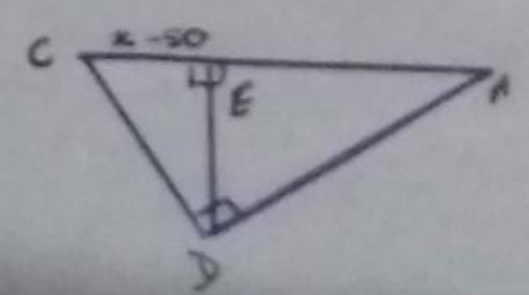
$50x - 2500 = 400$

$50x = 400 + 2500$

$50x = 2900$

$x = 58$

$\overline{CE}$



$x - 50$

$58 - 50$

8