Beatriz Gonçalves Eleutério

• Área do polígono

(1) $A + B + D + E = 540°$ → $C + F = 90°$

$AE \Rightarrow x^2 = 5^2 + 5^2$

$x^2 = 25 + 25$

$x = \sqrt{50} \rightarrow x = 5\sqrt{2}$ cm

$A_{\square} = 5 \cdot 5\sqrt{2}$

$A_{\square} = 25\sqrt{2}$ cm

$h = \frac{(5 \cdot 5)}{5\sqrt{2}}$

$h = \frac{5\sqrt{2}}{2}$ cm

$A_{\triangle} = \frac{\left(5\sqrt{2} \cdot \frac{5\sqrt{2}}{2}\right)}{2}$

$A_{\triangle} = 25\sqrt{2}$ cm²

$A_{ret} = 2 \cdot \left(\frac{25\sqrt{2}}{2}\right) + 25\sqrt{2}$

$A = 25 + 25\sqrt{2} \rightarrow$ $\boxed{A = 25(\sqrt{2} + 1)\ cm^2}$

(2) $S = \frac{\ell^2\sqrt{3}}{4}$

$16\sqrt{3} = \frac{\ell^2\sqrt{3}}{4}$

$16\sqrt{3} \cdot 4 = \ell^2\sqrt{3}$

$64\sqrt{3} = \sqrt{3} \cdot \ell^2$

$\ell^2 = \frac{64\sqrt{3}}{\sqrt{3}}$

$\ell = \sqrt{64}$

$\ell = 8\ m$

$h = \frac{\ell\sqrt{3}}{2}$

$h = \frac{8\sqrt{3}}{2}$

$h = 4\sqrt{3}\ m$

$d = \ell\sqrt{2}$

$4\sqrt{3} = \ell\sqrt{2}$

$\ell = \frac{4\sqrt{3}}{\sqrt{2}}$

$\ell = 2\sqrt{6}\ m$

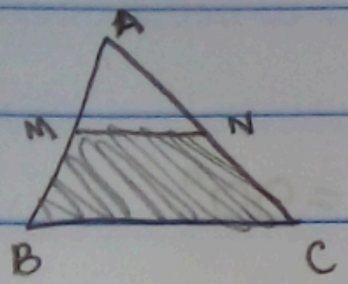
$A = (2\sqrt{6})^2$

$A = 4 \cdot 6$

$A = 24\ m^2$

③ $h = \frac{2\sqrt{3}}{2} \rightarrow h = \frac{\cancel{2}\sqrt{3}}{\cancel{2}} \rightarrow \boxed{h = \sqrt{3}}$

④



$A = 96\ m^2$

$NM = \frac{1}{2} . BC$

$\frac{A_{AMN}}{A_{ABC}} = \frac{1}{4} \rightarrow A_{AMN} = \frac{1}{4} . A_{ABC}$

$A_{AMN} = x . A_{ABC}$

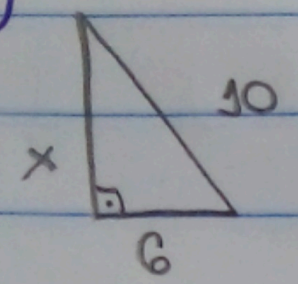
$x = A_{ABC} - A_{AMN}$

$x = 96 - \frac{1}{4} . (96)$

$x = 96 - 24$

$\boxed{x = 72\ m^2}$

5



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

$100 = 36 + x^2$

$x^2 = 100 - 36$

$x^2 = 64$

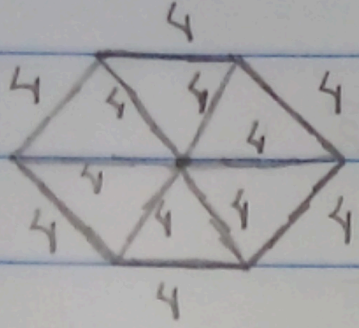
$x = \sqrt{64} \rightarrow x = 8$

$A_{\Delta} = \frac{(8 \cdot 6)}{2}$

$A_{\Delta} = \frac{48}{2}$

$A_{\Delta} = 24\ m^2$ =

6



$\rightarrow 4$

$A = \frac{4^2 \sqrt{3}}{4}$

$A = \frac{16 \sqrt{3}}{4}$

$A = (4\sqrt{3})^2 \cdot 4 \rightarrow A = 48\ cm^2$ =