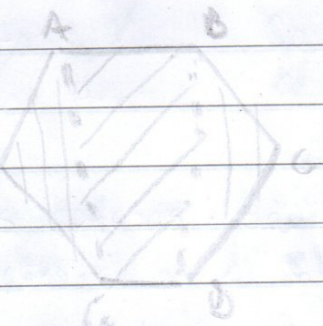
Áreas de polígonos

1) $(6-2)\,180^\circ = 720^\circ$

$A+B+D+E = 540^\circ$

$C = 90^\circ$

$F = 90^\circ$




$AE^2 = 5^2 + 5^2$

$AE^2 = 50$

$AE = 5\sqrt{2}$

ABDE

$A^{\square} = 5 \cdot 5\sqrt{2} = 25\sqrt{2}$

$h^{\triangle} = \dfrac{(5 \cdot 5)}{5\sqrt{2}} = \dfrac{5\sqrt{2}}{2}$

$A^{\triangle} = \left(5\sqrt{2} \cdot \dfrac{5\sqrt{2}}{2}\right)/2 = 25/2$

$A = 2(25/2) + 25\sqrt{2}$

$A = 25 + 25\sqrt{2}$

$A = 25\sqrt{2} + 25$

(E)

FORONI

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

$64\sqrt{3} = l^2\sqrt{3}$

$l^2 = 64$

$l = 8$

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

$h = 4\sqrt{3}$

$d = l\sqrt{2}$

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

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

$l = 4\sqrt{6}/2$

$l = 2\sqrt{6}$

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

$A = 4 \cdot 6 = 24\ m^2$

(B)

3) 3 triangulos ... APC, APB, BPC

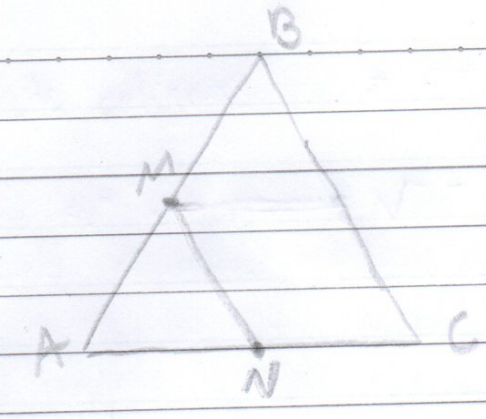
$APC = \frac{2h_1}{2}$ $APB = \frac{2h_2}{2}$ $BPC = \frac{2h_3}{2}$

$APC + APB + BPC = \sqrt{3}$

h = altura

$\frac{2h_1}{2} + \frac{2h_2}{2} + \frac{2h_3}{2} = \sqrt{3}$ B

4)




$ABC \sim AMN$

$\frac{ABC}{AMN} = 2$

$\frac{S_{AMN}}{S_{ABC}} = \frac{1}{4}$

$AMN = \frac{1}{4} ABC$

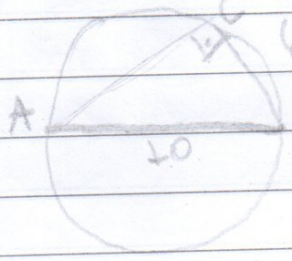
$x = 96 - \frac{1}{4}(96)$

$x = 96 - 24$

$x = 72\ m^2$

$72\ m^2$

5)

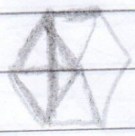



$10^2 = 6^2 + AC^2$

$AC = 8$

$\frac{8 \cdot 6}{2} = 24\ m^2$ (A)

6)



4 4 4

$h = \left(\frac{4\sqrt{3}}{2}\right) \cdot 2$

$h = 4\sqrt{3}$

$h^2 = 2$

$A = \frac{\cancel{2} \cdot 4\sqrt{3}}{\cancel{2}}$

$A = 4\sqrt{3}$ $4\sqrt{3}^2 = 16 \cdot 3 = 48\ cm^2$

FORONI