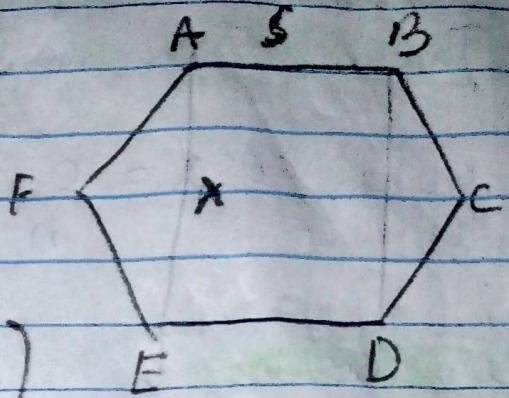
Exercícios

01- Triângulo AFE = BCD



$x^2 = 5^2 + 5^2$

$x = \sqrt{50}$

$x = 5\sqrt{2}$

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

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

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

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

$\triangle AFE = \frac{25}{2}$

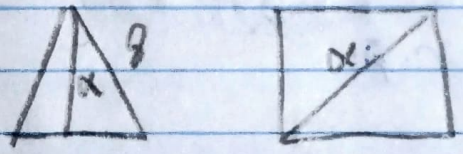
$A Hex = 25\sqrt{2} + \frac{25}{2} + \frac{25}{2}$

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

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

(E)

02-



$x = 4\sqrt{3}$

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

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

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

$l = \sqrt{64} = 8$

$\frac{b \cdot h}{2} = 16\sqrt{3}$

$8h = (16\sqrt{3})2$

$h = \frac{32\sqrt{3}}{8}$

$h = 4\sqrt{3}$

$d = l\sqrt{2}$

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

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

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

$l = 2\sqrt{6}$

$A\square = l^2$

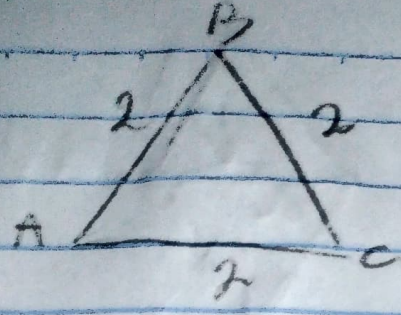
$A\square = (2\sqrt{6})^2$

$A\square = 4 \cdot 6$

$A\square = 24\ m^2$

(B)

03-



$A\Delta = \sqrt{3}$

$p = (2+2+2)/2$

$p = 3$

$S_{ABC} = p \cdot r$

$\sqrt{3} = 3 \cdot r$

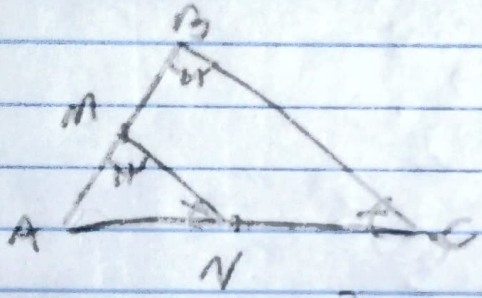
$r = \frac{\sqrt{3}}{3}$

Soma $= \frac{\sqrt{3}}{3} + \frac{\sqrt{3}}{3} + \frac{\sqrt{3}}{3}$

Soma $= \frac{3\sqrt{3}}{3} = \sqrt{3}$

(B)

04-



$A\Delta = 96 m^2$

$BC // MN$

ABC e AMN são semelhantes

$\frac{AMN}{ABC} = \left(\frac{1}{2}\right)^2$

$AN = \frac{AC}{2}$

$\frac{X}{96} = \frac{1}{4}$

$4X = 96$

$X = 24 m^2$

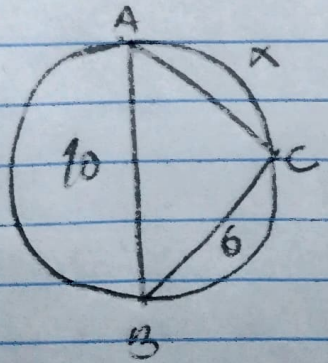
$ABC - AMN = MNBC$

$MNBC = 96 - 24$

$MNBC = 72 m^2$

$\frac{\frac{AC}{2}}{AC} = \frac{AC}{2AC} = \boxed{\frac{1}{2}}$

05-



$10^2 = X^2 + 6^2$

$X = \sqrt{64}$

$X = 8$

(A)

$A\Delta = \frac{6 \cdot 10 \cdot 8}{4 \cdot 5}$

$A\Delta = \frac{480}{20}$

$A\Delta = 24 cm^2$

06- $A\Delta = \frac{l^2\sqrt{3}}{4}$

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

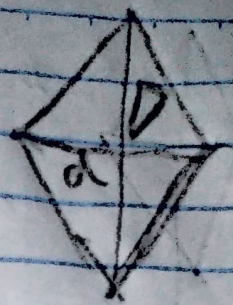
$A\Delta = 4\sqrt{3}$

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

$x^2 = 32$

$x = \sqrt{32}$

$x = 4\sqrt{2}$



$A\diamond = \frac{D \cdot d}{2}$

$A\diamond = \frac{(4\sqrt{3}) \cdot 2}{2}$

$A\diamond = 8\sqrt{3}$

$8\sqrt{3} = \frac{4\sqrt{2} \cdot d}{2}$

$16\sqrt{3} = 4\sqrt{2} \cdot d$

$d = \frac{16\sqrt{3}}{4\sqrt{2}}$

$d = 2\sqrt{6}$

$h = \frac{d}{2}$

$h = \frac{2\sqrt{6}}{2} = \sqrt{6}$

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

$A\triangle = \frac{4\sqrt{2} \cdot \sqrt{6}}{2}$

$A\triangle = 2\sqrt{12}$

$A\triangle = 2 \cdot 2\sqrt{3}$

$A\triangle = 4\sqrt{3}$

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