Tarefa Básica – Área de Polígono

01 Hexagono ABCDEF equilatero

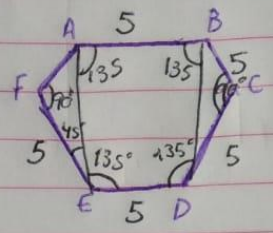
$l = 5cm$

$\hat{A}BDE = 135°$

$Si = (n-2).180$

$Si = (6-2).180$

$Si = 4.180 = 720$



$C+F = 180$

$A_T =$ 2. área do triângulo + área do retângulo

$A_T = 2.\frac{1}{2}.5.5.\operatorname{sen}90° + 5.5\sqrt{2}$

$A_T = \cancel{2}.\frac{1}{\cancel{2}}.5.5.1 + 5.5\sqrt{2}$

$A_T = 25 + 25\sqrt{2} = 25(1+\sqrt{2})$ E //

02 $A = \frac{(l^2.\sqrt{3})}{4}$ ∴

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

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

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

$64 = l^2$

$\sqrt{64} = 8$ //

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

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

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

$h = d$

$d = l\sqrt{2}$

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

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

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

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

Área do quadrado

$A = l^2$

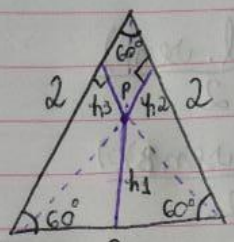
$A = (2\sqrt{6})^2$

$A = 4.6$

$A = 24m^2$ // (B)

(03) Triângulo ABC equilátero de lado 2
Área $\sqrt{3}$

distância de P a cada um dos lados



$A_{ABC} = A_{APB} + A_{APC} + A_{BPC}$

$A_{ABC} = \frac{2 \cdot h_3}{2} + \frac{2 \cdot h_2}{2} + \frac{2 \cdot h_1}{2}$

$h_1 + h_3 + h_2 = \sqrt{3}$ // (B)

(04) Triângulo escaleno ABC = 96 m^2
Triângulos AMN e ABC são semelhantes $\therefore K = \frac{AM}{AB} = \frac{1}{2}$

$\frac{AM}{AB} = K$

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

$K^2 = \frac{1}{4}$

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

$\frac{A_{AMN}}{96} = \frac{1}{4}$

$A_{AMN} = 24$

$A_{BMNC} = 96 - 24$

$A_{BMNC} = 72\ m^2$ //

(05) Lado AB = 10
Lado BC = 6

$h^2 = a^2 + b^2$

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

$100 = 36 + AC^2$

$100 - 36 = AC^2$

$64 = AC^2$

$AC = \sqrt{64} = 8$

$\frac{b \cdot h}{2} = \frac{8 \cdot 6}{2} = 4 \cdot 6 = 24\ cm^2$ // (A)

06) $\ell = 4\,cm$

$$\Delta ABC = \frac{(\ell \cdot \ell \cdot \operatorname{sen} B)}{2}$$

$$\Delta ABC = \frac{(4 \cdot 4 \cdot \operatorname{sen} 120)}{2}$$

$$\Delta ABC = \frac{8 \cdot \sqrt{3}}{2} = 4\sqrt{3} = \sqrt{48}$$

Área do quadrado

$$(ABC)^2 = (\sqrt{48})^2 = 48\,cm^2$$