

$$\frac{a}{\sin A} = \frac{b}{\sin B}$$

$$\hat{A} = 120^\circ + 40^\circ = 160^\circ$$

$$\frac{120}{\frac{\sqrt{3}}{2}} = \frac{120\sqrt{4}}{2}$$

$$\frac{120\sqrt{4}}{2} = \frac{240}{2} = 120 = \sin B \rightarrow \hat{B} = 40^\circ$$

$$\hat{C} = 120^\circ - 40^\circ = 80^\circ$$

$$A_1 = 120^\circ - (120^\circ + 40^\circ) = 40^\circ$$

$$\frac{120\sqrt{4}}{2} = \frac{120\sqrt{4}}{2} \rightarrow \frac{a}{\sin \hat{A}} = \frac{d}{\sin \hat{B}}$$

$$120 \cdot \sin 40^\circ = 120 \cdot \frac{\sqrt{3}}{2} = 60\sqrt{3}$$

$$\frac{c}{\sin C} = \frac{b}{\sin B} \Rightarrow c = \frac{\sin C}{\sin B} (b) = \frac{\sin C}{\sin B} (b^2 - 1)$$

$$b^2 - b - 1 = 0 \rightarrow \begin{cases} b = 1 \\ b = -1 \end{cases}$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$14^2 = 14^2 + 14^2 - 2(14)(14) \cos B$$

$$\cos B = \frac{1}{2} \rightarrow \sin \frac{120}{2} = 0.5$$

$$a^2 = b^2 + c^2 - 2bc \cos A \rightarrow a^2 = 14^2 + 14^2 + 14\sqrt{3} - (14 + 14\sqrt{3}) \cos 120^\circ$$

$$121 - 1 = 120 = a^2 \rightarrow a = 10\sqrt{4}$$

$$\frac{120}{\frac{\sqrt{3}}{2}} = \frac{120\sqrt{4}}{2} = \frac{240}{2} = 120 = \sin B \rightarrow \hat{B} = 40^\circ \text{ و } \hat{C} = 80^\circ$$

$$\frac{a}{\sin A} = \frac{b}{\sin B} \rightarrow \frac{120\sqrt{4}}{\frac{\sqrt{3}}{2}} = \frac{120}{\frac{\sqrt{3}}{2}} \rightarrow \hat{B} = 40^\circ \text{ و } \hat{C} = 80^\circ$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$r \geq 1 + r \cos A \rightarrow \cos A = \frac{1}{r}$$

$$a^p = 14 + 14 - \left(\frac{1}{2} \right) = 14 + 14 = 28$$

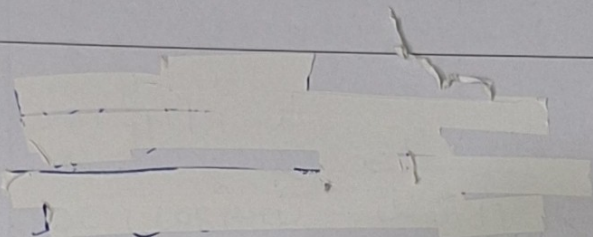
$$PE = 4 = \sqrt{K_0} = 2\sqrt{10}$$

$$A \overline{B} C \quad \rho$$

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$$B_C^N = P\omega + \gamma K + N(\omega)(1) \frac{1}{N} = P\omega + \gamma K - \epsilon = P\omega - B_C \rightarrow B_C \leq V \quad \text{الف}$$

$$S = b \cdot c \cdot \frac{1}{2} \sin A \rightarrow \omega \times \frac{1}{2} \times \frac{\sqrt{3}}{2} = \frac{1}{2} \times \frac{\sqrt{3}}{2} \quad (.)$$



$$a^m + b^m - c^m = a^m + a^m b - a^m c$$

$$(b-c)(b^2+c^2+bc) = a^2(b-c) \rightarrow a^2 = b^2+c^2+bc$$

$$a^2 = b^2+c^2-2bccosA$$

$$cosA = -\frac{1}{2}$$

$$S = \frac{1}{2} \sin \theta \times (\mu \cos \theta) (1 + \mu) \sin \theta \rightarrow \mu - \mu^2 + \mu^2 = 1$$

$$m_C^2 - m_C^2 + \omega = 0 \quad \begin{cases} |c| \rightarrow \cos \theta = 1 \rightarrow C = N \text{ g b s f} \\ |c| = \frac{a}{\omega} \end{cases}$$

$$a^N = 14 + 8 - \cancel{\sqrt{10}}(N)(8) \cos A = 14 + 8 - 1\sqrt{10} = 14 - 1\sqrt{10} \quad \boxed{14 - \sqrt{10}}$$