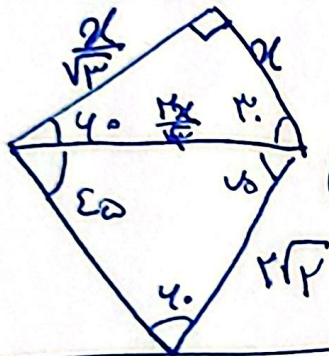


14/5 آفرین

$$\frac{\sin A \cdot \frac{\sqrt{2}}{2}}{BE} = \frac{\sin B}{\frac{AC}{\frac{\sqrt{2}}{2}}} = \frac{\sin C}{AB}$$

$$\sin B = \frac{\frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = \frac{1}{\sqrt{2}} \quad (1)$$

$$C = 120^\circ - \epsilon = 60^\circ, \quad B = \epsilon \quad \sin B = \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2} \quad (2)$$



$$\frac{1}{2} = \frac{\sin \epsilon}{\frac{\sqrt{2}}{2}} = \frac{\sin 40^\circ}{\frac{\sqrt{2}}{2}} = \frac{1}{\epsilon} \rightarrow \epsilon = 1 \quad (3)$$

$$\frac{b^2 - 2}{\sin B} = \frac{c}{\sin C} \rightarrow \frac{b}{\sin B} = \frac{c}{\sin C} \quad (b = 2) \quad (4)$$

$$b = b^2 - 2 \rightarrow b^2 - b - 2 = 0 \rightarrow (b - 2)(b + 1) = 0$$

$\sqrt{2} \quad \quad \quad \frac{1}{\sqrt{2}}$

$$149 = \epsilon a a + \epsilon \epsilon 1 - 2 \times 2 \times 2 \times \cos B \rightarrow \cos B = 0.1 \quad (5)$$

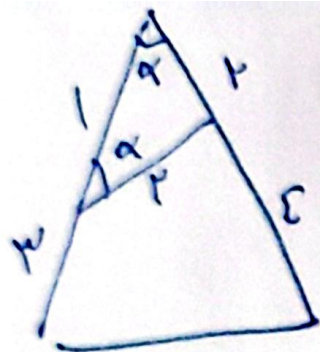
$$\sin B = \sqrt{1 - 0.01} = 0.99 \rightarrow \sin B = 0.99 \quad (6)$$

$$a^2 = b^2 + c^2 - 2bc \cos A = a^2 = 14 + \epsilon + 11 + 2\sqrt{2} - 2 \times \epsilon \times (\frac{\sqrt{2}}{2}) \times \frac{1}{\sqrt{2}} \quad (7)$$

$$\frac{\sin A}{BC} = \frac{\sin B}{AC} = \frac{\sin C}{AB} \rightarrow \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = \frac{\sin C}{\frac{\sqrt{2}}{2}} \rightarrow \sin C = \frac{\sqrt{2}}{2} \quad (8)$$

$\epsilon = 23^\circ$
 $\epsilon = C$

فرمان



$$x^2 = 19 + 14 - 2 \times 4 \times \frac{1}{\epsilon} \quad (4)$$

$$x^2 = 33 - 12 \rightarrow x = \sqrt{21}$$

$$\epsilon \pm \epsilon + 1 - 2 \times 2 \times 1 \times \cos A$$

$$\epsilon \times \cos A = 1 \rightarrow \cos A = \frac{1}{\epsilon}$$

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$$a^2 + b^2 + c^2 - 2bc \cos A \rightarrow 4\epsilon + 20 - 10 \times \frac{1}{\epsilon} \quad (5)$$

$$a^2 = 19 - \epsilon \rightarrow a = \sqrt{\epsilon}$$

$$\frac{1}{\epsilon} \times \frac{\sqrt{\epsilon}}{\epsilon} \times 4 \times 2 = 1 \cdot \sqrt{\epsilon} \quad (6)$$

$$\frac{b^2 + c^2 + 2bc \cos A - a^2}{bc \cos A + bc} = \frac{2bc(1 + \cos A)}{bc(1 + \cos A)} = 2 \quad (7)$$

$$a^2 + b^2 - c^2 = a^2 + a^2 b - a^2 c \quad (8)$$

$$b^2 - c^2 = a^2 b - a^2 c \rightarrow \frac{b^2 - c^2}{b - c} = a^2 \rightarrow b + c = a^2$$

$$4 + \frac{1}{\epsilon} + bc = 4 + \frac{1}{\epsilon} - 2bc \cos A$$

$$c \cdot \sin A = -\frac{1}{\epsilon} \rightarrow \hat{A} = 180^\circ$$

$$2 \cos A = 1 \rightarrow \cos A = \frac{1}{2}$$

$$\frac{1}{\epsilon} (1 - \cos \theta) (1 + 2 \cos \theta) = 1 \rightarrow 1 - \cos \theta = 1 + 2 \cos \theta$$

$$1 - 9 \cos \theta - \cos \theta - 1 \cos \theta = 1 \rightarrow \cos \theta = \frac{1 \pm \sqrt{49 - 4}}{9} = \frac{1 \pm \sqrt{45}}{9}$$

$$a^2 = \epsilon + 14 - 2 \times 2 \times \frac{1}{\epsilon} \times \frac{1}{\epsilon} = 15 - \frac{4}{\epsilon}$$