

$$\frac{12 \times 10}{12 \times 10} = \frac{12 \times 10}{12 \times \sin(180 - \alpha)}$$

$$\rightarrow \sin(180 - \alpha) = \frac{10}{12} \rightarrow 180 - \alpha = \hat{C} = \hat{A}$$

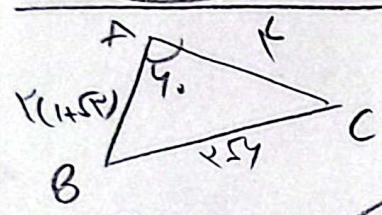
$$\alpha = \hat{C} = \hat{B}$$

$$\frac{12 \times 10}{12 \times 10} = \frac{AC \times 10}{\sin \alpha \times 10} \rightarrow AC = 12 \quad \alpha = \frac{10}{12} \times 180 = 150$$

$$\frac{b^2 - 1}{\sin \hat{B}} = \frac{c}{\sin \hat{C}} \rightarrow b^2 - 1 = b \rightarrow b^2 - b - 1 = 0 \quad (b-2)(b+1) = 0 \rightarrow b = 2$$

$$\frac{12}{10} = \frac{10}{10} + \frac{12}{10} - 2(10)(10) \cos \hat{B} \rightarrow 12 \cos \hat{B} = 12 - 10 = 2 \rightarrow \cos \hat{B} = \frac{2}{12} = \frac{1}{6}$$

$$\rightarrow \sin \hat{B} = \frac{4}{10}$$



$$14 + 14 + 12\sqrt{2} = 12\sqrt{2} - 12 = 12 = a^2 + a = 12\sqrt{2} \rightarrow (12)$$

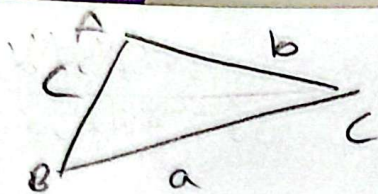
$$\frac{12 \times 10}{12 \times 10} = \frac{12}{\sin \hat{B}} \rightarrow \hat{B} = 40^\circ, \hat{C} = 100^\circ$$

$$\frac{12}{10} = \frac{12}{10} + \frac{12}{10} - 2(12)(12) \cos \alpha \rightarrow \cos \alpha = \frac{1}{2} \rightarrow$$

$$DE = 12 + 12 - 2(12)(12) \times \frac{1}{2} = 12 + 12 - 12 = 12 \rightarrow DE = 12\sqrt{2}$$

$$48 + 48 - 2(48)(48) \times \frac{1}{2} = 48 \rightarrow a = 48$$

$$S = 12 \times 10 \times \frac{1}{2} \times \frac{1}{10} = 12\sqrt{2}$$



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

$$\cancel{b^2} + \cancel{c^2} - 2bc \cos A = 2bc \cos A$$

$$\frac{2bc(1 + \cos A)}{2bc(1 + \cos A)} = 1$$

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

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

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

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

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

$$1 + 1 \cos \theta - \cos \theta - 1 \cos^2 \theta = 1 \rightarrow 1 \cos^2 \theta - 1 \cos \theta + 1 = 0$$

$$\cos^2 \theta - 1 \cos \theta + 1 = 0$$

$$(1 \cos \theta - 1)(1 \cos \theta - 0) = 0 \rightarrow 1 \cos \theta = \frac{1}{2} \rightarrow \cos \theta = 1$$

$$c = 1$$

$$b = 1$$

$$1^2 + 1^2 - 2(1)(1) \cos \theta = a^2$$

$$2 + 1 - 2 \cos \theta = a^2$$

$$2(1 - \cos \theta) \rightarrow a = \sqrt{2(1 - \cos \theta)}$$

فرض است