

(الف)

$$\frac{D}{11.} = \frac{Rad}{\pi} \Rightarrow \frac{3}{11.} \times \pi = Rad = \frac{3\pi}{2.}$$

(ب)

$$\frac{3\pi}{11.} \times \pi = \frac{28\pi}{24}$$

(۲) ✓

(ج)

(د)

$$\frac{3\pi}{11.} \div \pi = \frac{D}{11.} \Rightarrow D = 9. \Rightarrow D = \frac{9.}{11.} = 48^\circ$$

$$\frac{3\pi}{9} \div \pi = \frac{D}{11.} \Rightarrow 4D = 48. \Rightarrow D = 12.^\circ$$

$$\frac{D}{11.} = \frac{G}{9.} = \frac{Rad}{\pi} \Rightarrow \frac{128a}{9.} = \frac{5a}{11.} \Rightarrow 12D = 9. \times a \Rightarrow D = 12/8a$$

$$\frac{a\pi}{11.} = \frac{a}{9.} \Rightarrow 11D = a11. \Rightarrow D = a \frac{11.}{9.} \Rightarrow D = 12/8a$$

$$1.a + 12/8a + 12/8a = 48a = 11.^\circ \Rightarrow a = 4^\circ$$

(۲) ✓

(الف)

$$\frac{1}{4} \times \frac{\sqrt{3}}{4} - \frac{\sqrt{3}}{4} \times \frac{1}{4} - \frac{1}{4} \times \frac{1}{4} = 1$$

(ب)

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{13\sqrt{3}}{4}$$

(۲) ✓

$$\left(-\frac{1}{4} \times \frac{1}{4}\right) + \left(\frac{\sqrt{3}}{4} \times \frac{\sqrt{3}}{4}\right) = \frac{1}{4} = \sin^2 \theta \Rightarrow \sin \theta = \frac{\sqrt{3}}{4} \Rightarrow \cos \theta = \frac{\sqrt{3}}{4} \Rightarrow \theta = 60^\circ \rightarrow \tan 60^\circ = 1$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{1/4}{\sqrt{3}/4} = \frac{1}{\sqrt{3}} \rightarrow \theta = 30^\circ$$

(۱۷۵)

$$\frac{\frac{1}{4} \times \frac{\sqrt{3}}{4}}{(1 - \frac{1}{4}) \times \frac{1}{4}} = \frac{\frac{\sqrt{3}}{16}}{\frac{3}{16}} = \frac{\sqrt{3}}{3} = \tan \theta = \sqrt{3} \rightarrow \tan 60^\circ$$

$$4. = \frac{\pi}{3}$$

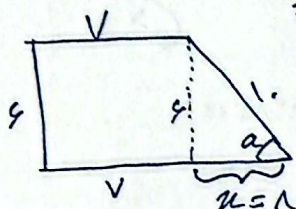
(۲) ✓

✓

$$8 \cos \theta = 5 \sin \theta$$

$$\frac{18 \cos \theta - \cos \theta}{8 \cos \theta - 4 \cos \theta} = \frac{14 \cos \theta}{4 \cos \theta} = 14$$

(۲) ✓

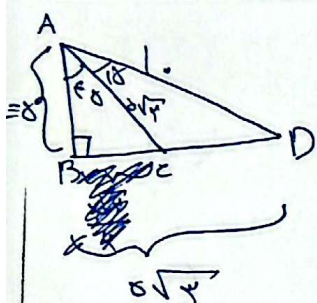


$$\sin \alpha = \frac{6}{10}$$

$$100 = 4^2 + n^2 \rightarrow n = 8$$

$$6 + 4 + 6 + 8 + 10 = 34$$

(۲) ✓



$$\sin \alpha = \frac{\sqrt{3}}{2}$$

$$\sin \alpha = \frac{\sqrt{3}}{2} = \frac{BD}{AD} = \frac{5\sqrt{3}}{10}$$

$$\cos \alpha = \frac{1}{2} = \frac{BC}{AC} \Rightarrow AC = 10$$

$$\frac{\sqrt{3}}{2} = \frac{BC}{10} \Rightarrow BC = 5\sqrt{3}$$

$$BD - BC = CD \Rightarrow 5\sqrt{3} - 5\sqrt{3} = 0 \rightarrow CD = 0$$

$$100 = 4^2 + n^2 \rightarrow n = 8$$

(۲) ✓

الف) نامیه سوم

ب) نامیه دوم

(۲) ✓

$$3 \sin \alpha = \cos \alpha \rightarrow \text{مقابل} = 1 \quad \text{مجاور} = 3$$

$$\text{وتر} = \sqrt{1^2 + 3^2} = \sqrt{10}$$

$$\sin \alpha = \frac{\text{مقابل}}{\text{وتر}} = \frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10}$$

(۱, ۵)

✓

و دنا هیه سیم است.