

$$\frac{D}{180} = \frac{\text{Rad}}{\pi} = \frac{G}{200}$$

الف) $\frac{3\pi}{20}$

ب) $\frac{25\pi}{36}$

ج) 75°

د) 18° (۲) ✓

$$\frac{G}{200} = \frac{D}{180} = \frac{\text{rad}}{\pi}$$

$$\frac{125a}{9} = \frac{D}{180} \rightarrow D = 12,5a$$

$$\frac{a\pi}{180} = \frac{D}{180} \rightarrow D = 22,5$$

$$10a + 22,5a + 12,5a = 180$$

$$45a = 180 \quad a = 4$$

(۲) ✓

الف) $(\frac{1}{4} \times \frac{\sqrt{3}}{2}) - (\frac{\sqrt{3}}{4} \times \frac{1}{2}) = 1 + 2$ (۱)

ب) $= \frac{\frac{1}{4} + 1 + 2}{\frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{2}} = \frac{13}{2\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{13\sqrt{3}}{6}$ (۲) ✓

$$\frac{1}{4} \times \frac{1}{2} + \frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{2} = \frac{1}{4} + \frac{3}{4} = 1 \quad \sin^2 \theta$$

$\sin \theta = \frac{\sqrt{2}}{2}$ (۲) ✓

$\cos^2 \theta = 1 - \frac{1}{2} = \frac{1}{2} \rightarrow \cos \theta = \frac{\sqrt{2}}{2}$

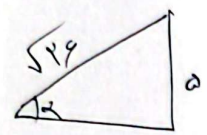
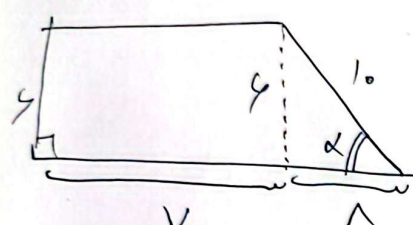
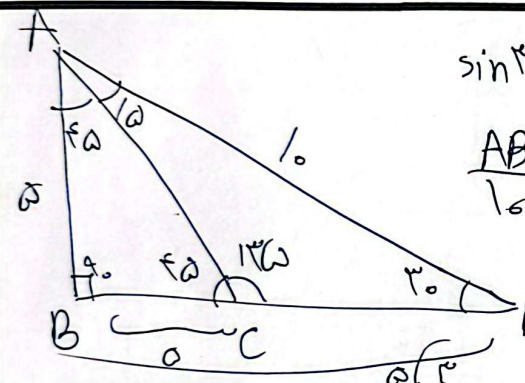
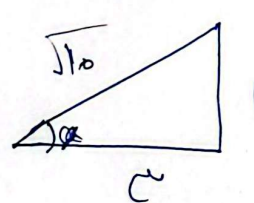
$\tan \theta = 1$

$$2 \times \frac{\sqrt{3}}{4} \times \frac{2}{3} \rightarrow 1 - (\frac{1}{\sqrt{3}})^2 = \frac{2}{3}$$

$$\frac{4}{9} \rightarrow (1 - (\frac{\sqrt{3}}{3})^2)^2 = (1 - \frac{1}{3})^2 = (\frac{2}{3})^2 = \frac{4}{9}$$

$\tan \theta = \sqrt{3} \quad \theta = 60^\circ$ (۲) ✓

$\frac{40}{180} = \frac{\text{Rad}}{\pi} \quad \text{Rad} = \frac{\pi}{3}$

$\tan \alpha = a$  $\sin \alpha = \frac{a}{\sqrt{1+a^2}}$ $\cos \alpha = \frac{1}{\sqrt{1+a^2}}$ Ⓟ ✓ $\frac{\frac{1-a-1}{\sqrt{1+a^2}}}{\frac{a-1}{\sqrt{1+a^2}}} = \frac{1-a-1}{a-1} = \frac{1}{1} = 1$	6
 $\sin \alpha = \frac{4}{10}$ $\text{Perimeter} = V + 4 + 10 = 38$ Ⓟ ✓	7
 $\sin 30^\circ = \frac{1}{2}$ $\tan 45^\circ = 1$ $\frac{a}{BC} = 1$ $\frac{AB}{10} = \frac{1}{2}$ $AB = 5$ $BC = a$ $\cos 30^\circ = \frac{\sqrt{3}}{2}$ $\frac{BD}{10} = \frac{\sqrt{2}}{2}$ $CD = 5\sqrt{3} - 5$ Ⓟ ✓	8
الف) سوم ب) دوم Ⓟ ✓	9
 $\sin \alpha = -\frac{1}{\sqrt{10}} \times \frac{\sqrt{10}}{\sqrt{11}} = \frac{-\sqrt{10}}{11}$ Ⓟ ✓ روند مثبت ناحیه سوم ← $\sin \alpha < 0$	10