

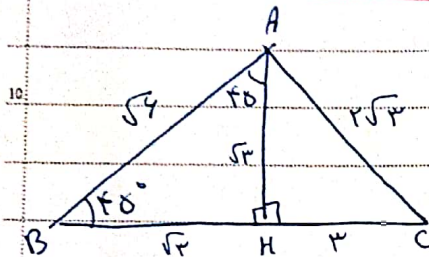
$$\frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r} = \frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r}$$

$$(\sin 135^\circ + \sin 135^\circ)(\cos 135^\circ - \cos 135^\circ) = \left(\frac{\sqrt{r} + \sqrt{r}}{r}\right)\left(\frac{\sqrt{r} + \sqrt{r}}{r}\right) = \frac{-1}{r}$$

$$\frac{\sqrt{r} - \sqrt{r}}{r} = \frac{1}{r}$$

$$\frac{1 + r \tan^2 135^\circ}{r \cos^2 135^\circ + r \cos^2 135^\circ} = \frac{r}{r} = \frac{1}{r}$$

$$r \times \frac{1}{r} = r + r \times \frac{1}{r} = r$$



$$(\sqrt{r})^2 + r^2 = (2\sqrt{r})^2$$

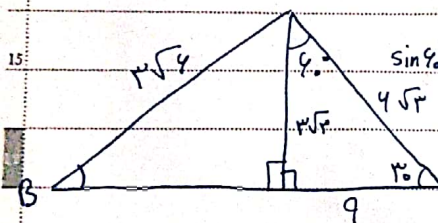
$$r + r^2 = 4r$$

$$r^2 - 3r = 0$$

$$r(r - 3) = 0$$

$$r = 3 \Rightarrow \alpha = r \Rightarrow HC$$

$S = HC$ 2



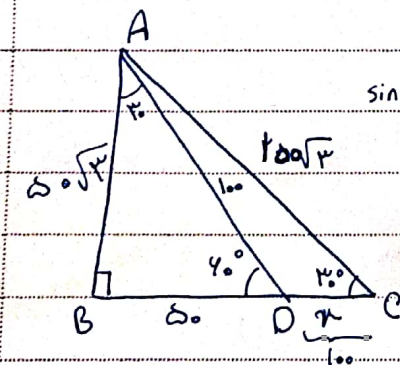
$$\sin 60^\circ = \frac{\sqrt{r}}{r} \Rightarrow \frac{\sqrt{r}}{r} \times r = 3$$

$$r = 4\sqrt{r}$$

$60^\circ = B$ 2

$$\Rightarrow (4\sqrt{r})^2 = 1 + r$$

$$\sin B = \frac{3\sqrt{r}}{4\sqrt{r}} = \frac{3}{4} = \frac{\sqrt{r}}{r} \Rightarrow 135^\circ$$



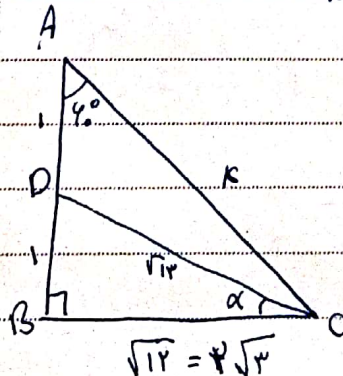
$$\sin 45^\circ = \frac{\sqrt{r}}{r} \Rightarrow \frac{\sqrt{r}}{r} \times r = 5\sqrt{r}$$

$$\sin 45^\circ = \frac{1}{r} \Rightarrow \frac{1}{r} \times r = 5\sqrt{r}$$

$$\sin 45^\circ = \frac{\sqrt{r}}{r} \times 10\sqrt{r} = 10$$

$r = 10$ 3

$\sin \alpha = ?$



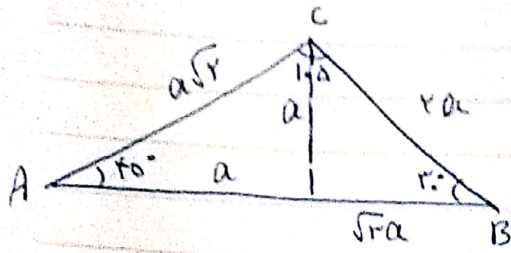
$$\cos 45^\circ = \frac{AC}{r}$$

$$(r)^2 + (1)^2 = 1^2$$

$$DC = 1 + 1 = 1 \Rightarrow DC = \sqrt{1}$$

$$\sin \alpha = \frac{1}{\sqrt{1}} = \frac{\sqrt{1}}{1}$$

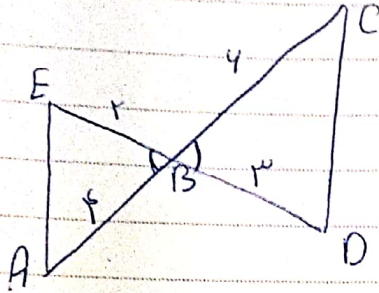
Arman



$$B = \left(\frac{1.0 + 4.5}{10.0} \right) = 11.5^\circ$$

سوال 4: $P = \frac{AB}{AC}$

$$\Rightarrow \frac{a(1+\sqrt{2})}{a\sqrt{2}} = \frac{1+\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2} + \sqrt{2} + 1}{\sqrt{2}} = \frac{\sqrt{2} + 1}{1}$$

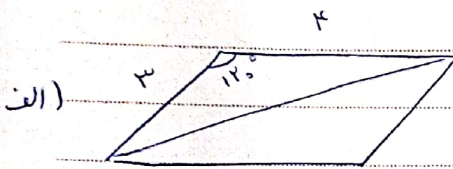


سوال 5: در مثل قائم الزاویه ABC

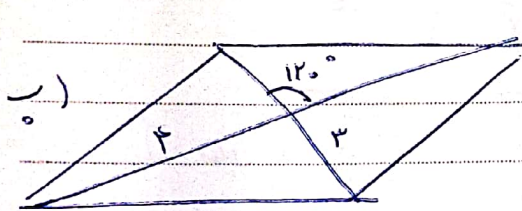
$$S = \frac{1}{2} ab \sin \alpha$$

$$\frac{S_{ABE}}{S_{BCD}} = \frac{\frac{1}{2} \times 2 \times 4 \times \sin B}{\frac{1}{2} \times 3 \times 4 \times \sin B} = \frac{1}{1.5} = \frac{2}{3}$$

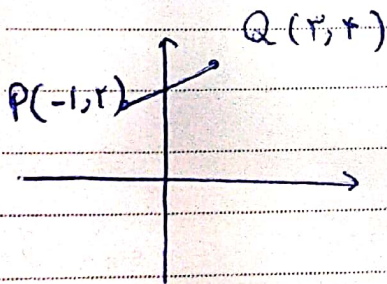
سوال 6: مساحت متوازی الاضلاع



$$S = ab \sin \alpha \Rightarrow 3 \times 4 \times \sin 45^\circ = 4\sqrt{3}$$



$$S = ab \sin \alpha = 3 \times 4 \times \sin 45^\circ = 4\sqrt{3}$$



$$(y - y_1) = m(x - x_1)$$

$$2 - 4 = m(3 - (-1))$$

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

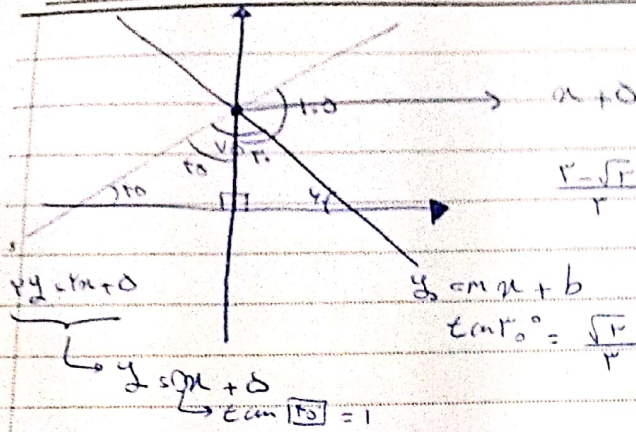
$$\frac{1}{\cos \alpha} = \sec \alpha = 1 + \tan^2 \alpha$$

$$1 + \frac{1}{\cos^2 \alpha} = \frac{1}{\cos^2 \alpha}$$

$$\cos \alpha = \frac{1}{2} \Rightarrow \cos^2 \alpha = \frac{1}{4}$$

$$\frac{1}{2} \Rightarrow \cos \alpha = \frac{1}{2}$$

سوال 7:



$$a + b = \frac{\int_1^2 (x^2 + 1) dx}{2} = \frac{1}{2} \left[\frac{x^3}{3} + x \right]_1^2 = \frac{1}{2} \left(\frac{8}{3} + 2 - \frac{1}{3} - 1 \right) = \frac{1}{2} \left(\frac{7}{3} + 1 \right) = \frac{1}{2} \left(\frac{10}{3} \right) = \frac{5}{3}$$

$$\frac{r - \sqrt{r}}{r} x = a, b$$

$$y = mx + b$$

$$\tan \theta = \frac{\sqrt{15}}{1}$$

$$- \cos n$$

$\sin n$

- E an n

$$\cos(\alpha + m) + \sin\left(\frac{\alpha}{r} - m\right) - \tan\left(\frac{r\alpha}{r} + m\right)$$

$$s = \cos n + \sin n + \tan n = f(n)$$

$$\frac{\sigma_y}{y} = a + \frac{a}{y}$$


$$\begin{array}{c} \text{⊗} \end{array} \frac{14}{r} + \frac{a}{r} + u \qquad \frac{14}{r} + \frac{a}{r} - u \quad \begin{array}{c} \text{⊗} \end{array}$$

$$\sin\left(\frac{14.9}{r} + m\right) + \cos\left(\frac{10.9}{r} - n\right)$$

$$-\cos m - \sin m$$

$$\cos(4\pi + \pi) - \sin(4\pi - \pi)$$

$$\cos m + \sin m$$