

γ_0 : المثلث

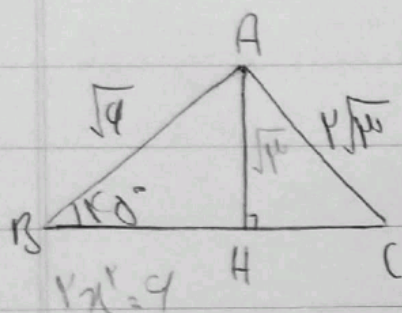
γ_0

المثلث

$$1) (\sin 40^\circ + \sin 10^\circ)(\cos 40^\circ - \cos 10^\circ) = \quad (1)$$

$$\left(\frac{\sqrt{1}}{2} - \frac{\sqrt{10}}{2}\right)\left(\frac{\sqrt{1}}{2} + \frac{\sqrt{10}}{2}\right) = \frac{1}{2} - \frac{10}{2} = -\frac{9}{2}$$

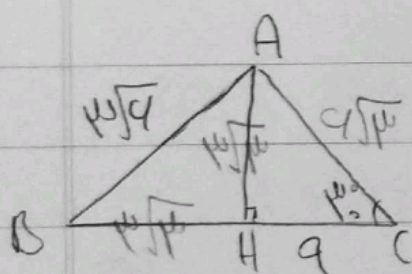
$$2) \frac{1 + \tan 40^\circ \tan 10^\circ}{\cos 40^\circ \cos 10^\circ + \sin 40^\circ \sin 10^\circ} = \frac{1}{\cos 50^\circ} = \frac{1}{\sin 40^\circ}$$



$$HC = 10 - 1 = 9$$

$$HC = 10$$

(1)

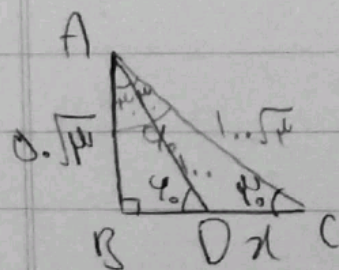


$$AH = BH \Rightarrow \hat{A} = \hat{B} = 40^\circ$$

(2)

$$\cos 40^\circ = \frac{\sqrt{10}}{2} \quad AC = 9 \div \frac{\sqrt{10}}{2} = 9\sqrt{10}$$

$$\Delta F - PU = PU \Rightarrow BH = 10\sqrt{10}$$



$$0.5\sqrt{10} : \frac{\sqrt{10}}{2} = 1 \dots$$

$$0.5\sqrt{10} : \frac{1}{2} = 1 \dots \sqrt{10}$$

$$10 \dots 10 \dots 10 \dots$$

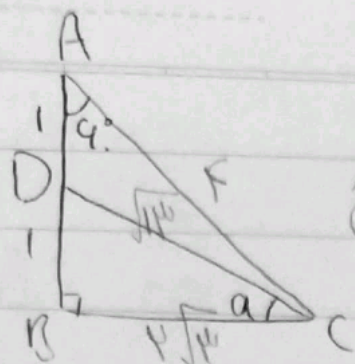
(1) (2)

$$x = 10 - 0.5 \dots$$

$$BC = 10$$

$$1 \dots 10 \dots 10 \dots$$

$$BD = 5$$



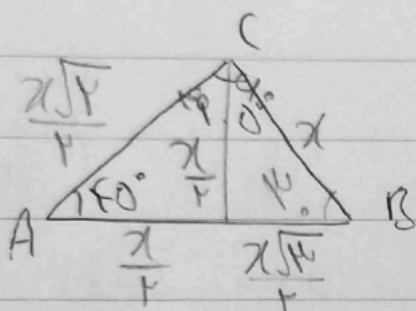
$$\angle = \phi: AC \cdot y = \frac{1}{y} = r$$

$$14 \cdot r = 14 \quad BC \cdot y \sqrt{10}$$

$$1 + 14 = 15$$

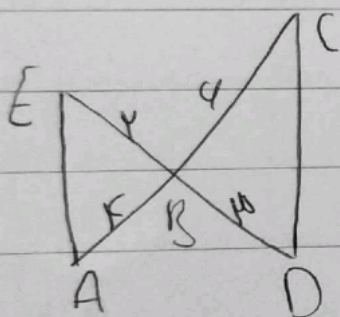
$$CD = \sqrt{15}$$

$$\sin \alpha = \frac{BD}{CD} = \frac{\sqrt{10}}{15}$$



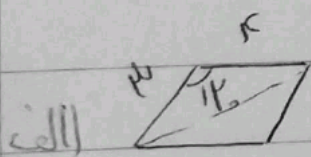
$$\frac{AB}{AC} = \frac{x(1+\sqrt{10})}{\frac{x\sqrt{10}}{r}} = \frac{\sqrt{r}(1+\sqrt{10})}{y}$$

(K)



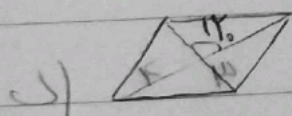
$$\frac{S_{ACE}}{S_{BCD}} = \frac{\frac{1}{2} \times y \times r}{\frac{1}{2} \times 4 \times r} = \frac{r}{4}$$

(L)

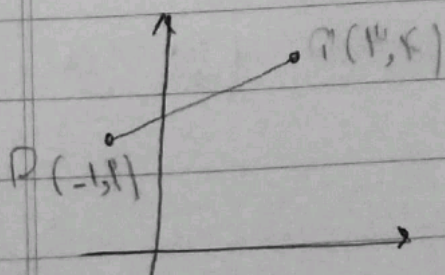


$$ab \sin \alpha = 10 \times r \times \frac{\sqrt{10}}{r} = 10\sqrt{10}$$

(M)



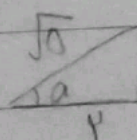
$$\frac{1}{r} ab \sin \alpha = \frac{1}{r} \times 10 \times r \times \frac{\sqrt{10}}{r} = 10\sqrt{10}$$



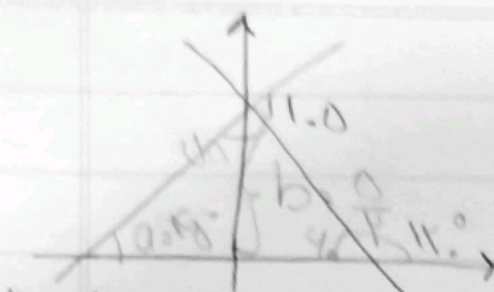
$$m = \frac{\Delta y}{\Delta x} = \frac{1-1}{1+1} = \frac{1}{2}$$

(N)

$$m = \tan \theta = \frac{1}{2}$$



$$\cos \theta = \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$



$$mb = \sqrt{10} \times 0 = -\frac{0\sqrt{10}}{1}$$

(1)

$$y = mx + b$$

$$y = mx + b \quad m = \tan 45^\circ = 1$$

$$y = x + 0$$

$$m = \tan a = 1$$

$$a = 45^\circ$$

$$f\left(\frac{\pi}{4}\right) = \cos\left(\pi + \frac{\pi}{4}\right) + \sin\left(\frac{\pi}{4} - \frac{\pi}{4}\right) - \tan\left(\frac{10\pi}{4} + \frac{\pi}{4}\right) \quad (9)$$

$$= -\cos\left(\frac{\pi}{4}\right) + \cos\left(\frac{\pi}{4}\right) + \cot\left(\frac{\pi}{4}\right)$$

$$= -\sqrt{10}$$

$$\frac{\cos x - \sin x}{-\cos x + \sin x} = \frac{-(\cos x + \sin x)}{-\cos x + \sin x} = -1$$

(1)