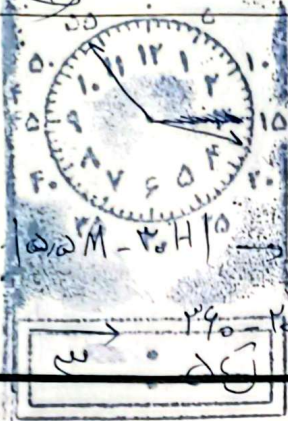


①



$$1 \rightarrow 2 \times 30 = 60$$

$$120 + 60 + 27 = 107$$

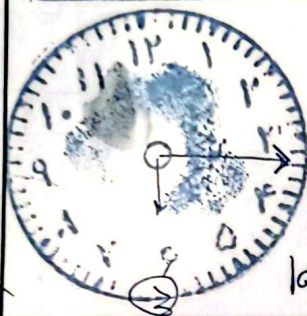
$$2 \rightarrow \frac{360}{2} = 180$$

$$(10, 10M - 30H)$$

$$|10, 10M - 30H| \rightarrow |(10, 10 \times 10) - (30 \times 3)| = 20V$$

$$360 - 20V = 153?$$

← (زاویه کمتر ۱۸۰ الیام لید)



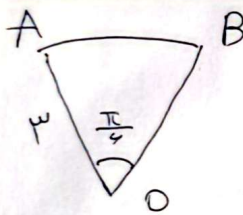
$$1 \rightarrow 2 \times 6 = 12$$

$$2 \rightarrow 9$$

$$12 + 6 + 9 + 11$$

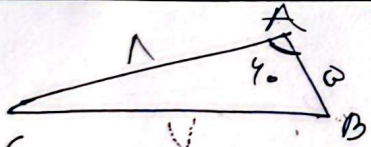
$$|10, 10M - 30H| \rightarrow$$

$$|10 \times 10 - 30 \times 9| = 11$$



$$S = \frac{a}{2} R^2 \rightarrow \frac{\pi}{2} \times 1^2 \times 3^2 = \frac{9\pi}{2}$$

$$P = aR + 2R \rightarrow \frac{\pi}{2} \times 1^2 + 2 \times 3 = \frac{4\pi}{2}$$



$$S = \frac{1}{2} ab \sin A \rightarrow \frac{1}{2} \times 10 \times 10 \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$$

پیدا کردن مساحت سه ضلعی به دست آوردن مساحت از هر دو هم ممکن بود

$$BC = \sqrt{AB^2 + AC^2 - 2AB \cdot AC \cdot \cos A} = \sqrt{10^2 + 10^2 - 2 \cdot 10 \cdot 10 \cdot \frac{1}{2}} = 10$$

$$\frac{10}{\sin 60} = \frac{10\sqrt{3}}{\sin B} = \frac{AB}{\sin C}$$

$$10 \times \sin B = \frac{10\sqrt{3}}{2} \rightarrow B = 60$$

$$10, 10, 10$$

$$\frac{R_{ad}}{\pi} = \frac{D}{180} \rightarrow C = \frac{V \cdot \pi}{12}$$

$\frac{-\tan \alpha + 3(\tan \alpha)}{-\tan \alpha - (\tan \alpha)} = \frac{-\tan \alpha + 3 \tan \alpha}{-\tan \alpha - \tan \alpha}$ $\frac{2 \tan \alpha}{-2 \tan \alpha} = -1$	6
$\tan(\alpha + \beta) = \frac{\tan \alpha + \tan \beta}{1 - \tan \alpha \tan \beta}$ $2 \tan(30^\circ + 40^\circ) + \tan(90^\circ + 40^\circ)^{(\pm)} = \frac{2(2 + \sqrt{3}) - (2 + \sqrt{3})}{3(2 - \sqrt{3}) - 1}$ $2 \tan(100^\circ + 40^\circ) - \tan(340^\circ - 130^\circ) = \frac{\cancel{2(2 + \sqrt{3})} - \cancel{(2 + \sqrt{3})}}{\cancel{3(2 - \sqrt{3})} - 1} = \frac{\cot \frac{\pi}{12}}{-2} = \dots = -\frac{2}{3} - 1$	این فرموله جوابه، رو قد نوشت $\frac{p}{12}$ و $\frac{R}{12}$ راه کم مناسب تری ندانسته؟ 1
$\frac{(\sin x + \cos x)(\sin x + \cos x) + (\sin x - \cos x)(\sin x - \cos x)}{(\sin x - \cos x)(\sin x + \cos x)}$ $\Rightarrow \frac{2 \sin^2 x + 2 \cos^2 x}{\sin^2 x - \cos^2 x} \Rightarrow \frac{2(\sin^2 x + \cos^2 x)}{\sin^2 x - \cos^2 x}$ $\frac{2}{1 - 2 \cos^2 x}$	سبج سیک 8
$1 + \tan^2 x = \sec^2 x \Rightarrow \tan^2 x = 0$ $\frac{\sin^2 x - 2 + 2 \cos^2 x + 1}{1 - \cos^2 x + 2 \cos^2 x - 1} \rightarrow \frac{2 \sin^2 x - 1}{\cos^2 x} \rightarrow \frac{2 - 2 \cos^2 x - 1}{\cos^2 x}$ $\Rightarrow \frac{1 - 2 \cos^2 x}{\cos^2 x} \rightarrow \frac{1}{\cos^2 x} - 2 = \sec^2 x - 2$ $\sqrt{2} \cos x \Rightarrow \sqrt{2} \Rightarrow \sin x = \frac{\sqrt{2}}{2}$ $\cos x = \frac{\sqrt{2}}{2} \Rightarrow \tan x = \frac{\sin x}{\cos x} = 1$	9 20
الف) $\cos(2\pi/3) \rightarrow \cos^2(\pi/2) \rightarrow \frac{1 + \cos 2\theta}{2} = \frac{1 + \sqrt{3}}{2}$ ب) $\sin(4\pi/3) \rightarrow \sin^2(\pi/2) \rightarrow \frac{1 - \cos 2\theta}{2} = 1 - \cos 120^\circ$ $\rightarrow \frac{1 + \sqrt{3}}{2} \times \frac{1}{2} = \frac{1 + \sqrt{3}}{4} \rightarrow \sin$ $\sin \frac{\sqrt{2 + \sqrt{2}}}{2}$	10