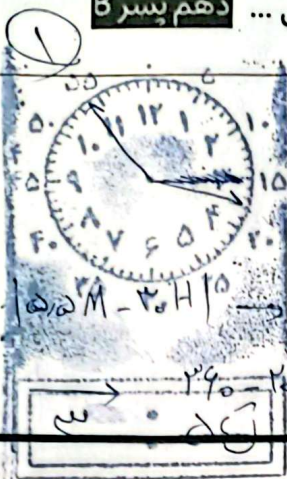


14, 20

نام و نام خانوادگی: ... فزایان ... پاسخنامه تشریحی تکلیف شماره ... 19 ... کلاس ... دهم پسر B



1 → 2
 $4 \times 30 = 120$
 $120 + 10 + 27 = 157$ ✓

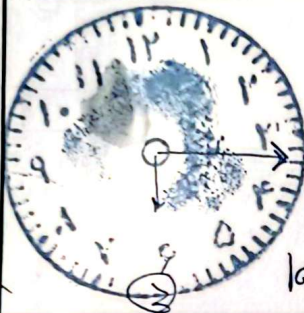
2 → $\frac{\omega \times 2}{2} = 4 \text{ CV}$

(2) $(5, 5M - 3, H)$

$|5, 5M - 3, H| \rightarrow (5, 5 \times 54) - (30 \times 3) = 20V$

$390 - 20V = 153$ ✓

← (زاویه کمتر 180 الیام لید)



1 → $2 \times 6 = 12$

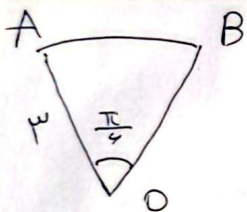
2 → 9

$12 + 6 + 9 + 11$

(1) $|5, 5M - 30H| \rightarrow$

$|50 \times 18 - 30 \times 4| = 11$ ✓

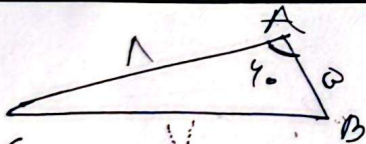
(2)



$S = \frac{a}{2} R^2 \rightarrow \frac{\pi}{6} \times 2 \times 3 \times 3 = \frac{3\pi}{2}$ ✓

$P = aR + 2R \rightarrow \frac{\pi}{6} \times 2 + 2 \times 3 = \frac{4\pi}{3}$ ✓

(2)



$S = \frac{1}{2} ab \sin A \rightarrow \frac{1}{2} \times 5 \times 11 \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$ ✓

$P = a + b + c = 5 + 11 + 17 = 33$ ✓

$BC = \sqrt{AB^2 + AC^2 - 2AB \cdot AC \cdot \cos A} = 17$ ✓

$\sqrt{s(s-a)(s-b)(s-c)}$
 $s = \frac{a+b+c}{2} = \frac{33}{2}$

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

$B = \frac{\pi}{4}$

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

$10, 10, 10$

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

(رابطه)

(170)

$$\frac{-\tan \alpha + 3(\tan \alpha)}{-\tan \alpha - (\tan \alpha)} = \frac{-\tan \alpha + 3 \tan \alpha}{-\tan \alpha - \tan \alpha}$$

$$\frac{2 \tan \alpha}{-2 \tan \alpha} = -1 \quad \checkmark$$

$$\tan(\alpha + \beta) = \frac{\tan \alpha + \tan \beta}{1 - \tan \alpha \tan \beta}$$

$$2 \tan(30^\circ + 40^\circ) + \tan(90^\circ + 40^\circ) = \frac{2(2 + \sqrt{3}) - (2 + \sqrt{3})}{2(2 - \sqrt{3}) - 1}$$

$$2 \tan(100^\circ + 40^\circ) - \tan(340^\circ - 130^\circ) = \frac{2 \cot \frac{\pi}{12}}{-2} = -\cot \frac{\pi}{12}$$

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

$$\Rightarrow \frac{2 \sin^2 x + 2 \cos^2 x}{\sin^2 x - \cos^2 x} = \frac{2(\sin^2 x + \cos^2 x)}{\sin^2 x - \cos^2 x}$$

$$1 + \tan^2 x = \sec^2 x \Rightarrow \tan^2 x = \sec^2 x - 1$$

$$\frac{\sin^2 x - 1 + \cos^2 x + 1}{1 - \cos^2 x + 2 \cos^2 x - 1} \rightarrow \frac{2 \sin^2 x}{\cos^2 x} = 2 \tan^2 x$$

$$\Rightarrow \frac{2 - 2 \cos^2 x}{\cos^2 x} = \frac{2}{\cos^2 x} - 2 = 2 \sec^2 x - 2$$

$$\cos(2\theta) \rightarrow \cos^2(\theta) \rightarrow \frac{1 + \cos 2\theta}{2} = \frac{1 + \sqrt{2}}{2}$$

$$\sin(4\theta) \rightarrow \sin^2(2\theta) \rightarrow \frac{1 - \cos 4\theta}{2} = \frac{1 - \cos 120^\circ}{2} = \frac{1 - (-\frac{1}{2})}{2} = \frac{3}{4}$$