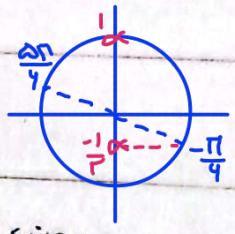
19,75

۱- $\frac{\sin}{\cos} = \frac{\sin}{|\cos|} \Rightarrow |\cos| = \cos$ ، $\cos > 0$ ، $\sin > 0$ ⇒ ربع اول ✓ (۲)

۲- 

$\frac{-1}{2} < \frac{m-1}{2} \leq 1 \Rightarrow -1 < m \leq 3$ (۱,۷۵)

دقت!

۳- $\sin \cdot \cos = \frac{-1}{4}$ $(\sin + \cos)^2 = \frac{1}{2} \Rightarrow \sin + \cos = \sqrt{\frac{1}{2}}$ (۲)

$\Rightarrow \frac{1}{\sin^2 \cos^2} = \frac{1}{-\frac{1}{4}\sqrt{\frac{1}{2}}} = -8\sqrt{2}$ ✓

۴- $S = \frac{AD+BC}{2} \times AH = \frac{4+8}{2} \times 4 = 24$ ✓ (۲)

۵- $-\cot(10)\tan(10) - \sin(10)(-)(\sin(10)) = -\cos^2(10) = k\cos^2(10)$ (۲)

$\Rightarrow k = -1$ ✓

۶- $\sqrt{2}\left(-\frac{\sqrt{2}}{2}\right)(-\cos(20)) = \sqrt{2}\left(\frac{\sqrt{2}}{2}\right)(\cos(20)) \Rightarrow \frac{\frac{a}{2}\cos(70)}{\cos(20)} = \frac{a}{2}$ ✓ (۲)

۷- $\frac{\sin^2(3m)}{14\sin^2(6m)} \Rightarrow \frac{\frac{3}{4}}{14 \times (2-\frac{\sqrt{2}}{4})^2} = \frac{3(2+\sqrt{2})}{14(2-\sqrt{2})} = \frac{6+3\sqrt{2}}{14}$ ✓ (۲)

۸- $\sin = -\frac{3}{5}$ $\tan\frac{\alpha}{2} = \frac{\sin\alpha}{1+\cos\alpha} = \frac{-\frac{3}{5}}{1-\frac{4}{5}} = -3$ ✓ $\Rightarrow \cos = \frac{4}{5}$ (۲)

۹- $\frac{\sin}{1-\cos} = \frac{1+\cos}{\sin} = \cot\frac{A}{2} \Rightarrow 2\cot\frac{A}{2} = k\cot\frac{A}{2} \Rightarrow k = 2$ ✓ (۲)

۱۰- $\sin^2 = \frac{18}{100} \Rightarrow \cos = \pm\frac{\sqrt{82}}{10} \Rightarrow \cos\left(\frac{3\pi}{4}\right)\cos\alpha - \sin\left(\frac{3\pi}{4}\right)\sin\alpha$ (۲)

$= \frac{14}{50} - \frac{3}{50} = \frac{11}{50} = \frac{4}{10}$ ✓