

19, 20

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره کلاس

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$$\frac{\cos}{\sin} \leq \frac{\cos}{\sqrt{1-\cos^2}} \Rightarrow \frac{1}{\sin} = \frac{1}{|\sin|} \Rightarrow \sin \leq |\sin| \Rightarrow \sin > 0$$

(2)

$$\frac{1}{|\cos|} - \frac{\sin}{\cos} \leq \frac{1-\sin}{|\cos|} \Rightarrow -\frac{\sin}{\cos} = -\frac{\sin}{|\cos|} \Rightarrow \cos > 0$$

$\sin > 0, \cos > 0 \Rightarrow$ اول در ربع اول

$$-\frac{\pi}{2} < \alpha < \frac{\pi}{2} \Rightarrow -\frac{\pi}{2} < \alpha < \frac{\pi}{2} \Rightarrow -\frac{1}{2} < \sin \alpha \leq 1$$

(2)

$$-\frac{1}{2} < \frac{m-1}{2} \leq 1 \Rightarrow -1 < m-1 \leq 2 \Rightarrow -1 < m \leq 3$$

(2)

$$\frac{\sin}{\cos} + \frac{\cos}{\sin} = -\frac{1}{\cos \sin} \Rightarrow \frac{\sin^2 + \cos^2}{\cos \sin} = -1 \Rightarrow \frac{1}{\cos \sin} = -1 \Rightarrow \cos \sin = -\frac{1}{2}$$

(3)

$$(\sin + \cos)^2 = \sin^2 + \cos^2 + 2\sin \cos = 1 + 2\sin \cos = 1 - \frac{1}{\cos \sin} = 1 - \frac{1}{-\frac{1}{2}} = 1 + 2 = 3$$

$$\left(-\frac{1}{\sqrt{3}}\right)^2 = \frac{1}{3} = \sin^2 + \cos^2 + 2\left(-\frac{1}{\sqrt{3}}\right)\left(-\frac{1}{\sqrt{3}}\right) = 1 + \frac{2}{3} = \frac{5}{3}$$



$$\frac{1}{\sqrt{2}} = \frac{m}{2} \Rightarrow m = \sqrt{2}$$

$$\frac{1-\sqrt{2}}{2} \leq m \leq \frac{1+\sqrt{2}}{2}$$

$$2 + 2\sqrt{2} \leq m$$

$$1 + \sqrt{2} \leq m$$

سوال

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

(2)

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

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

$$\tan(180^\circ) \neq \tan(180^\circ + 10^\circ) \neq -\cot(10^\circ)$$

(1, 1, 1)

$$\tan(-10^\circ) \neq -\tan(10^\circ) \neq -\tan(180^\circ - 10^\circ) \neq \tan(10^\circ)$$

$$\sin(1090^\circ) \neq \sin(180^\circ + 10^\circ) = \sin(10^\circ)$$

$$\cos(100^\circ) \neq \cos(180^\circ - 10^\circ) \neq -\sin(10^\circ)$$

دقت!

$$-\cot(10^\circ) \times \tan(10^\circ) - \sin(10^\circ) \times -\sin(10^\circ) = -1 + \sin^2(10^\circ)$$

$-\cos^2(10^\circ)$

~~$$\sin^2(10^\circ) + \cos^2(10^\circ)$$~~

$$1 - \sin^2 \alpha = \cos^2 \alpha$$

$$\cos^2(10^\circ) \neq \cos^2(10^\circ) \rightarrow$$

~~$k=1$~~
 $k=-1$

$$r \cos(\theta + \alpha) + \sin(\theta + \alpha) = \sqrt{r} \sin(\theta + \alpha) \cos(\theta + \alpha)$$

(r)
f

$$\sqrt{r} \left(-\frac{r}{r}\right) \times -\cos(\theta + \alpha) = \sqrt{r} \left(\frac{\sqrt{r}}{r}\right) \cos(\theta + \alpha)$$

$$\frac{r}{r} \cos(\theta + \alpha) + \cos(\theta + \alpha) \rightarrow \frac{r}{r} \cos(\theta + \alpha) \rightarrow \frac{r}{r} \frac{\cos(\theta + \alpha)}{\cos(\theta + \alpha)} = \frac{r}{r} \checkmark$$

$$f\left(\frac{\pi}{3}\right) \rightarrow 19 \cos^2\left(\frac{\pi}{3}\right) \cdot \cos^2\left(\frac{\pi}{3}\right) \cos^2\left(\frac{\pi}{3}\right) \cos^2\left(\frac{\pi}{3}\right)$$

(r)
v

$$\cos\left(\frac{\pi}{3}\right) = \cos\frac{\pi}{3} = \sin\frac{\pi}{3} \rightarrow \cos\frac{\pi}{3} + 1 + \cos\frac{\pi}{3} \Rightarrow \frac{r}{r} + 1 = r \cos\frac{\pi}{3}$$

$$r \sqrt{r} + \Lambda \times \frac{r}{r} \times \frac{r}{r} \times \frac{r}{r} = \frac{r \sqrt{r} + \Lambda}{r} \checkmark$$

$$\frac{1 - \sin}{1 + \sin} \times \frac{1 - \sin}{1 - \sin} \frac{(1 - \sin)^2}{\cos^2} = \frac{1 - \sin}{\cos} \rightarrow \frac{1 - \sin}{\cos} = r$$

(r)
A

$$\cos^2 + \epsilon \cos \Rightarrow \cos(\epsilon \cos + \epsilon) \Rightarrow \cos \epsilon \times \cos \epsilon$$

$$\cos \epsilon \times \cos \frac{\pi}{2} + \sin \frac{\pi}{2} \rightarrow \frac{-\epsilon}{0} = \cos \frac{\pi}{2} - \sin \frac{\pi}{2}$$

$$1 = \cos \frac{\pi}{2} + \sin \frac{\pi}{2}$$

$$\frac{\sin}{1 - \cos} + \frac{1 + \cos}{\sin} \Rightarrow \frac{\sin(1 + \cos)}{\sin^2} + \frac{\sin(1 + \cos)}{\sin^2} = \frac{2 \sin(1 + \cos)}{\sin^2} = \frac{2(1 + \cos)}{\sin}$$

(r)
q

$$\frac{r(1 + \cos \frac{\theta}{2} - \sin \frac{\theta}{2})}{2 \sin \frac{\theta}{2} \cos \frac{\theta}{2}} \cdot \frac{\cos \frac{\theta}{2} + \sin \frac{\theta}{2} \cos \frac{\theta}{2} + \cos \frac{\theta}{2} - \sin \frac{\theta}{2}}{\sin \frac{\theta}{2} \cos \frac{\theta}{2}} = \frac{r \cos \frac{\theta}{2}}{\sin \frac{\theta}{2} \cos \frac{\theta}{2}} = \frac{r \cos \frac{\theta}{2}}{\sin \frac{\theta}{2}}$$

$$\cos\left(\frac{11\pi}{8} + \alpha\right) = \cos\left(\frac{5\pi}{8} + \alpha\right) \cdot \cos \frac{3\pi}{4} - \sin \frac{3\pi}{4} \sin \alpha$$

$$\frac{r}{100} + 2 \cos^2 = 1 \rightarrow \cos^2 = \frac{99}{100} = \cos^2 \frac{\alpha}{100} = \cos^2 \frac{\alpha}{100}$$

(r)
1.

$\frac{r}{\Delta}$