

## Exact String of Values

Evaluate exactly

$$\begin{aligned}\text{ex. } 2\sin\left(\frac{\pi}{6}\right) + 2\cos\left(\frac{2\pi}{3}\right) \\ &= 2\left(\frac{1}{2}\right) + 2\left(-\frac{1}{2}\right) \\ &= 1 - 1 \\ &= 0\end{aligned}$$

$$\begin{aligned}\sin \frac{\pi}{6} &= \frac{1}{2} \\ \cos \frac{2\pi}{3} &= -\frac{1}{2}\end{aligned}$$

$$\begin{aligned}\text{ex. } \cos^2\left(\frac{5\pi}{4}\right) + \sec^2\left(\frac{11\pi}{6}\right) \\ &\left(\frac{-\sqrt{2}}{2}\right)^2 + \left(\frac{2}{\sqrt{3}}\right)^2 \\ &\frac{2}{4} + \frac{4}{3} \\ &\frac{6}{12} + \frac{16}{12} \\ &\frac{22}{12}\end{aligned}$$

$$\begin{aligned}&\left(\cos\left(\frac{5\pi}{4}\right)\right)^2 \\ \cos \frac{5\pi}{4} &= -\frac{\sqrt{2}}{2} \\ \cos \frac{11\pi}{6} &= \frac{\sqrt{3}}{2}\end{aligned}$$

ex. 
$$\frac{\cos\left(\frac{13\pi}{4}\right)}{\cot^2\left(-\frac{2\pi}{3}\right)}$$

$$\frac{\frac{-\sqrt{2}}{2}}{\left(\frac{1}{\sqrt{3}}\right)^2}$$

$$-\frac{\sqrt{2}}{2} \cdot \frac{3}{1}$$

$$-\frac{3\sqrt{2}}{2}$$

$$\cos\left(\frac{13\pi}{4}\right)$$

$$-\frac{8\pi}{4}$$

$$\cos\left(\frac{5\pi}{4}\right) = -\frac{\sqrt{2}}{2}$$

$$\tan\left(-\frac{2\pi}{3}\right)$$

$$+\frac{6\pi}{3}$$

$$\tan\left(\frac{4\pi}{3}\right) = \sqrt{3}$$

ex.  $\sin\left(\frac{7\pi}{3}\right) + \cos(330^\circ) - \tan\left(\frac{11\pi}{4}\right) + \sin\left(-\frac{\pi}{2}\right)$

$$\frac{\sqrt{3}}{2} + \frac{\sqrt{3}}{2} - (-1) + (-1)$$

$$\frac{2\sqrt{3}}{2} \text{ or } \sqrt{3}$$

$\sin\left(-\frac{\pi}{2}\right) + 4\frac{\pi}{2}$   
 $\sin\left(\frac{3\pi}{2}\right) = -1$   
 $\sin\left(\frac{7\pi}{3}\right) - 6\frac{\pi}{3}$   
 $\sin\left(\frac{\pi}{3}\right) = \frac{\sqrt{3}}{2}$   
 $\cos(330^\circ) = \frac{\sqrt{3}}{2}$   
 $\tan\left(\frac{11\pi}{4}\right) - 8\frac{\pi}{4}$   
 $\tan\left(\frac{3\pi}{4}\right) = -1$

Try  $\sin\left(\frac{3\pi}{2}\right) + \cos^2\left(-\frac{5\pi}{4}\right) - \tan\left(\frac{11\pi}{6}\right)$

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

$$-1 + \frac{2}{4} + \frac{1}{\sqrt{3}}$$

$$-\frac{1}{2} + \frac{1}{\sqrt{3}}$$

$$\frac{-\sqrt{3} + 2}{2\sqrt{3}}$$

or

$$-1 + \frac{2}{4} + \frac{\sqrt{3}}{3}$$

$$-\frac{1}{2} + \frac{\sqrt{3}}{3}$$

$$\frac{-3 + 2\sqrt{3}}{6}$$

Blue WS

mini Quiz - Exact Values

Tues, Mar 17th