



Trigonometry Identities - Sum/Difference Identity True/False (Radians)

1 Is this sum/difference identity correct?

$$\tan\left(\frac{4\pi}{3} - \frac{2\pi}{3}\right) = \frac{\tan\left(\frac{4\pi}{3}\right) - \tan\left(\frac{2\pi}{3}\right)}{1 + \tan\left(\frac{4\pi}{3}\right)\tan\left(\frac{2\pi}{3}\right)}$$

A
Yes

B
No

2 Is this sum/difference identity correct?

$$\cos\left(\frac{7\pi}{6} - \frac{5\pi}{3}\right) = \sin\left(\frac{7\pi}{6}\right)\cos\left(\frac{5\pi}{3}\right) - \cos\left(\frac{7\pi}{6}\right)\sin\left(\frac{5\pi}{3}\right)$$

A
Yes

B
No

3 Is this sum/difference identity correct?

$$\tan\left(\frac{5\pi}{6} + \frac{5\pi}{3}\right) = \frac{\tan\left(\frac{5\pi}{6}\right) + \tan\left(\frac{5\pi}{3}\right)}{1 - \tan\left(\frac{5\pi}{6}\right)\tan\left(\frac{5\pi}{3}\right)}$$

A
Yes

B
No

4 Is this sum/difference identity correct?

$$\tan\left(\frac{\pi}{6} - \frac{7\pi}{4}\right) = \frac{\tan\left(\frac{\pi}{6}\right) + \tan\left(\frac{7\pi}{4}\right)}{\tan^2\left(\frac{\pi}{6}\right)\tan^2\left(\frac{7\pi}{4}\right)}$$

A
Yes

B
No

5 Is this sum/difference identity correct?

$$\sin\left(\frac{5\pi}{4} - \frac{7\pi}{4}\right) = \sin\left(\frac{5\pi}{4}\right)\cos\left(\frac{7\pi}{4}\right) - \cos\left(\frac{5\pi}{4}\right)\sin\left(\frac{7\pi}{4}\right)$$

A
Yes

B
No

6 Is this sum/difference identity correct?

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

A
Yes

B
No

7 Is this sum/difference identity correct?

$$\sin\left(\frac{5\pi}{3} - \frac{5\pi}{4}\right) = \sin\left(\frac{5\pi}{3}\right)\cos\left(\frac{5\pi}{4}\right) - \cos\left(\frac{5\pi}{3}\right)\sin\left(\frac{5\pi}{4}\right)$$

A
Yes

B
No

8 Is this sum/difference identity correct?

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

A
Yes

B
No