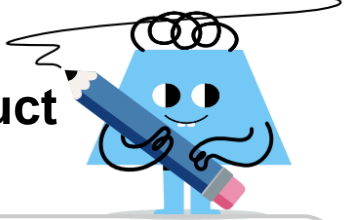
Name

Trigonometry Identities - Sum to Product to Identity (Radians)



1 Complete the sum to product identity for this expression $\sin(\frac{7\pi}{6}) + \sin(\frac{\pi}{3})$

A $= 2\sin(\frac{(\frac{7\pi}{6} + \frac{\pi}{3})}{2})\cos(\frac{(\frac{7\pi}{6} - \frac{\pi}{3})}{2})$

B $= 2\cos(\frac{(\frac{7\pi}{6} - \frac{\pi}{3})}{2}) - \sin(\frac{(\frac{7\pi}{6} + \frac{\pi}{3})}{2})$

2 Complete the sum to product identity for this expression $\cos(\frac{2\pi}{3}) + \cos(\frac{7\pi}{6})$

A $= 2\cos(\frac{(\frac{2\pi}{3} + \frac{7\pi}{6})}{2})\cos(\frac{(\frac{2\pi}{3} - \frac{7\pi}{6})}{2})$

B $= 2\sin(\frac{(\frac{2\pi}{3} + \frac{7\pi}{6})}{2})\sin(\frac{(\frac{2\pi}{3} - \frac{7\pi}{6})}{2})$

3 Complete the sum to product identity for this expression $\cos(\frac{5\pi}{4}) - \cos(\frac{2\pi}{3})$

A $= -2\sin(\frac{(\frac{5\pi}{4} + \frac{2\pi}{3})}{2})\sin(\frac{(\frac{5\pi}{4} - \frac{2\pi}{3})}{2})$

B $= \cos(\frac{(\frac{5\pi}{4} + \frac{2\pi}{3})}{2})\sin(\frac{(\frac{5\pi}{4} + \frac{2\pi}{3})}{2})$

4 Complete the sum to product identity for this expression $\cos(\frac{2\pi}{3}) + \cos(\frac{5\pi}{6})$

A $= 2\sin(\frac{(\frac{2\pi}{3} + \frac{5\pi}{6})}{2})\sin(\frac{(\frac{2\pi}{3} - \frac{5\pi}{6})}{2})$

B $= 2\cos(\frac{(\frac{2\pi}{3} + \frac{5\pi}{6})}{2})\cos(\frac{(\frac{2\pi}{3} - \frac{5\pi}{6})}{2})$

5 Complete the sum to product identity for this expression $\cos(\frac{5\pi}{4}) + \cos(\frac{5\pi}{3})$

A $= 2\sin(\frac{(\frac{5\pi}{4} + \frac{5\pi}{3})}{2})\sin(\frac{(\frac{5\pi}{4} - \frac{5\pi}{3})}{2})$

B $= 2\cos(\frac{(\frac{5\pi}{4} + \frac{5\pi}{3})}{2})\cos(\frac{(\frac{5\pi}{4} - \frac{5\pi}{3})}{2})$

6 Complete the sum to product identity for this expression $\sin(\frac{5\pi}{4}) + \sin(\frac{\pi}{6})$

A $= 2\sin(\frac{(\frac{5\pi}{4} + \frac{\pi}{6})}{2})\cos(\frac{(\frac{5\pi}{4} - \frac{\pi}{6})}{2})$

B $= 2\cos(\frac{(\frac{5\pi}{4} - \frac{\pi}{6})}{2}) - \sin(\frac{(\frac{5\pi}{4} + \frac{\pi}{6})}{2})$

7 Complete the sum to product identity for this expression $\cos(\frac{2\pi}{3}) - \cos(\frac{\pi}{6})$

A $= \cos(\frac{(\frac{2\pi}{3} + \frac{\pi}{6})}{2})\sin(\frac{(\frac{2\pi}{3} + \frac{\pi}{6})}{2})$

B $= -2\sin(\frac{(\frac{2\pi}{3} + \frac{\pi}{6})}{2})\sin(\frac{(\frac{2\pi}{3} - \frac{\pi}{6})}{2})$

8 Complete the sum to product identity for this expression $\cos(\frac{\pi}{4}) + \cos(\frac{3\pi}{4})$

A $= 2\cos(\frac{(\frac{\pi}{4} + \frac{3\pi}{4})}{2})\cos(\frac{(\frac{\pi}{4} - \frac{3\pi}{4})}{2})$

B $= \cos(\frac{(\frac{\pi}{4} + \frac{3\pi}{4})}{2})\cos(\frac{(\frac{\pi}{4} + \frac{3\pi}{4})}{2})$