Precalculus

5-05 Sum and Difference Formulas

Sum and Difference Formulas

$\sin(u + v) = \sin u \cos v + \cos u \sin v$

$\cos(u + v) = \cos u \cos v - \sin u \sin v$

$\tan(u + v) = \frac{\tan u + \tan v}{1 - \tan u \tan v}$

$\sin(u - v) = \sin u \cos v - \cos u \sin v$

$\cos(u - v) = \cos u \cos v + \sin u \sin v$

$\tan(u - v) = \frac{\tan u - \tan v}{1 + \tan u \tan v}$

Use a sum or difference formula to find the exact value of $\tan 255°$

Find the exact value of $\cos 95° \cos 35° + \sin 95° \sin 35°$

Derive a reduction formula for $\sin\left(t + \frac{\pi}{2}\right)$

Find all solutions in $[0, 2\pi)$: $\cos\left(x - \frac{\pi}{3}\right) + \cos\left(x + \frac{\pi}{3}\right) = 1$