

Addition and Subtraction Identities

Formulas:

$$\sin(x + y) =$$

$$\sin(x - y) =$$

$$\cos(x + y) =$$

$$\cos(x - y) =$$

$$\tan(x - y) =$$

$$\tan(x + y) =$$

A. Given $\sin a = -.9980$; $\cos a = .1543$ and $\sin b = -.2624$, $\cos b = .9650$

find $\sin(a + b) =$

$$\cos(a - b) =$$

$$\tan(a + b) =$$

B. Find the exact value:

1. $\sin 15^\circ$

4. $\cos 75^\circ$

2. $\sin 285^\circ$

5. $\tan 105^\circ$

3. $\cos 135^\circ$

6. $\tan 195^\circ$

C. Simplify the given expression:

7. $\sin 20^\circ \cos 25^\circ + \cos 20^\circ \sin 25^\circ =$

8. $\cos 70^\circ \cos 10^\circ + \sin 70^\circ \sin 10^\circ =$

9. $\sin 20^\circ \cos 70^\circ - \cos 20^\circ \sin 70^\circ =$

10. $\frac{\tan 20^\circ + \tan 10^\circ}{1 - \tan 20^\circ \tan 10^\circ} =$