

6-4 Sum and Difference Identities

Name _____

Use the sum and difference identities to find the exact value of each function.

1. $\cos 75^\circ$

2. $\sin 375^\circ$

3. $\sin (-105^\circ)$

4. $\sin (-315^\circ)$

5. $\sin 95^\circ \cos 55^\circ + \cos 95^\circ \sin 55^\circ$

6. $\cos 140^\circ \cos 40^\circ + \sin 140^\circ \sin 40^\circ$

7. $\tan (135^\circ + 120^\circ)$

8. $\tan 345^\circ$

If u and v are the measures of two first quadrant angles, find the exact value of each function.

9. If $\sin u = \frac{12}{13}$ and $\cos v = \frac{3}{5}$, find $\cos (u - v)$.

10. If $\cos u = \frac{12}{13}$ and $\cos v = \frac{12}{37}$, find $\tan (u - v)$.

11. If $\cos u = \frac{8}{17}$ and $\tan v = \frac{5}{12}$, find $\cos (u + v)$.

12. If $\csc u = \frac{13}{12}$ and $\sec v = \frac{5}{3}$, find $\sin (u - v)$.