

OBJECTIVE: You will be able to use exact values to evaluate trigonometric expressions.

Evaluate each expression. Show your work.

1. $12 \sin 45^\circ \cos 45^\circ$

2. $20 \sin \frac{\pi}{3} \cos \frac{4\pi}{3}$

3. $\cos \frac{\pi}{4} \sin \frac{7\pi}{6} - \sin 30^\circ \cos 135^\circ$

4. $\cos \pi \cos \frac{\pi}{4} - \sin \pi \sin \frac{\pi}{4}$

5. $\sec 60^\circ \tan \frac{3\pi}{4} - \cot \frac{\pi}{3} \sin 60^\circ$

6. $\cos^2 60^\circ + \sin^2 60^\circ$

7. $\sin^2 \frac{5\pi}{6} + \cos^2 \frac{\pi}{6}$

8. $\tan 120^\circ + \sin^2 \frac{\pi}{6} + \cos^2 150^\circ$