

Test will Not Be
M.C.!

Use basic identities to simplify the expression.

1) $\cos \theta - \cos \theta \sin^2 \theta$

A) $\cos^3 \theta$

B) $\tan^2 \theta$

C) $\sin \theta$

D) $\sec^2 \theta$

2) $\sin^2 \theta + \tan^2 \theta + \cos^2 \theta$

A) $\tan^2 \theta$

B) $\sec^2 \theta$

C) $\cos^3 \theta$

D) $\sin \theta$

3) $\frac{\cos^2 \theta}{\sin^2 \theta} + \csc \theta \sin \theta$

A) $\sec^2 \theta$

B) $\csc^2 \theta$

C) 1

D) $\tan^2 \theta$

Simplify the expression to either 1 or -1.

4) $\sec(-x) \cos(-x)$

A) -1

B) 1

Simplify the expression.

5) $(\sin^2 x + \cos^2 x) - (\csc^2 x - \cot^2 x)$

A) $\cos^2 x$

B) 0

C) $\sin^2 x$

D) 2

6) $\frac{\sin^2 x - 1}{\cos(-x)}$

A) $\sin x$

B) $\cos x$

C) $-\cos x$

D) $-\sin x$

7) $\frac{1 - \sin^2 x}{\sin x - \csc x}$

A) $\cos^2 x$

B) $-\sin x$

C) $\sin^2 x$

D) $-\cos x$

Prove the identity.

8) $\tan^2 x = \sec^2 x - \sin^2 x - \cos^2 x$

9) $1 + \sec^2 x \sin^2 x = \sec^2 x$

Find an exact value.

10) $\cos 105^\circ$

A) $\sqrt{6} - \sqrt{2}$

B) $\frac{-\sqrt{6} + \sqrt{2}}{4}$

C) $\frac{\sqrt{6} - \sqrt{2}}{4}$

D) $\sqrt{6} + \sqrt{2}$

11) $\sin \frac{-11\pi}{12}$

A) $\frac{-\sqrt{6} - \sqrt{2}}{4}$

B) $\frac{\sqrt{2} - \sqrt{6}}{4}$

C) $\frac{\sqrt{6} + \sqrt{2}}{4}$

D) $\frac{\sqrt{6} - \sqrt{2}}{4}$

Write the expression as the sine, cosine, or tangent of an angle.

12) $\sin \frac{\pi}{2} \cos \frac{\pi}{7} + \cos \frac{\pi}{2} \sin \frac{\pi}{7}$

A) $\cos \frac{9\pi}{14}$

B) $\sin \frac{9\pi}{14}$

C) $\cos \frac{-5\pi}{14}$

D) $\sin \frac{-5\pi}{14}$

13) $\cos 9x \cos 6x - \sin 9x \sin 6x$

A) $\sin 15x$

B) $\sin 3x$

C) $\cos 3x$

D) $\cos 15x$

Find the exact value by using a half-angle identity.

14) $\sin \frac{7\pi}{8}$

15) Find the exact value of $\cos(157.5^\circ)$

16) Find exact value of $\sin(-67.5^\circ)$