

Use the given information and the Pythagorean identities to determine the exact trigonometric value.

1. Given $\sin x = -\frac{1}{5}$, $\pi < x < \frac{3\pi}{2}$, find $\cos x$.

2. Given $\tan \theta = -\frac{4}{7}$, $270^\circ < \theta < 360^\circ$, find $\sec \theta$.

3. Given $\cos x = -\frac{1}{5}$, $\frac{3\pi}{2} < x < 2\pi$, find $\tan x$.

4. Given $\sin x = -\frac{1}{3}$, $\pi < x < \frac{3\pi}{2}$, find **all 5** remaining trigonometric ratios.

Use the reciprocal, quotient, and Pythagorean identities to simplify.


5. $\sin \theta \cot \theta$

6. $\cos x \tan x \csc x$

7. $\cos x \csc x \tan x$

8. $\cos \theta \cot \theta + \sin \theta$

9. $\cos x \tan x + \sin x \cot x$

10.  $(1 + \cos \theta)(\csc \theta - \cot \theta)$