

Trigonometric Expressions

Name: _____

Date: _____

Evaluate the following trigonometric expressions.

1) $\sec^{-1}(\cot(\frac{3\pi}{2}))$

2) $\cot^{-1}(\sin(\frac{5\pi}{2}))$

3) $\cos^{-1}(\frac{3}{2}\tan(\frac{5\pi}{6}))$

4) $\sin^{-1}(\frac{1}{2}\operatorname{cosec}(\frac{\pi}{2}))$

5) $\tan^{-1}(\sec(3\pi))$

6) $\sec^{-1}(\sin(\frac{4\pi}{3}))$

7) $\tan^{-1}(\sin(-\frac{5\pi}{2}))$

8) $\sec^{-1}(\sin(\frac{6\pi}{3}))$

9) $\cot^{-1}(2\cos(\frac{5\pi}{6}))$

10) $\cos^{-1}(\frac{1}{2}\tan(\frac{4\pi}{3}))$

11) $\sin^{-1}(\frac{1}{2}\sec(\frac{5\pi}{4}))$

12) $\operatorname{cosec}^{-1}(\tan(\frac{\pi}{4}))$

Trigonometric Expressions

Name: _____

Date: _____

Evaluate the following trigonometric expressions.

1) $\sec^{-1}(\cot(\frac{3\pi}{2}))$

$$\frac{-\pi}{2}$$

2) $\cot^{-1}(\sin(\frac{5\pi}{2}))$

$$\frac{\pi}{4}$$

3) $\cos^{-1}(\frac{3}{2}\tan(\frac{5\pi}{6}))$

$$\frac{5\pi}{6}$$

4) $\sin^{-1}(\frac{1}{2}\operatorname{cosec}(\frac{\pi}{2}))$

$$-\frac{\pi}{6}$$

5) $\tan^{-1}(\sec(3\pi))$

$$-\frac{\pi}{4}$$

6) $\sec^{-1}(\sin(\frac{4\pi}{3}))$

$$-\frac{\pi}{6}$$

7) $\tan^{-1}(\sin(-\frac{5\pi}{2}))$

$$-\frac{\pi}{4}$$

8) $\sec^{-1}(\sin(\frac{6\pi}{3}))$

$$0$$

9) $\cot^{-1}(2\cos(\frac{5\pi}{6}))$

$$\frac{\pi}{6}$$

10) $\cos^{-1}(\frac{1}{2}\tan(\frac{4\pi}{3}))$

$$\frac{\pi}{6}$$

11) $\sin^{-1}(\frac{1}{2}\sec(\frac{5\pi}{4}))$

$$-\frac{\pi}{4}$$

12) $\operatorname{cosec}^{-1}(\tan(\frac{\pi}{4}))$

$$\frac{\pi}{2}$$