Trigonometry Workbook

Inverse trig functions

krista king MATH

INVERSE TRIG RELATIONS

1. In degrees, use the unit circle to find the set of angles whose cosine is $-\sqrt{2}/2$.

2. In both radians and degrees, use the unit circle to find the set of angles whose sine is -1.

3. In both radians and degrees, use the unit circle to find the set of angles whose secant is 2.

4. In both radians and degrees, use the unit circle to find the set of angles whose cosecant is 1.

5. In both radians and degrees, use the unit circle to find the set of angles whose tangent is 1.

6. In both radians and degrees, use the unit circle to find the set of angles whose cotangent is 0.

INVERSE TRIG FUNCTIONS

1. Find the value of the inverse tangent function.

$$\tan^{-1}(0)$$

2. Find the value of the inverse cotangent function.

$$\cot^{-1}(-1)$$

3. Find the value of the inverse sine function.

$$\sin^{-1}\left(-\frac{1}{2}\right)$$

4. Find the value of the inverse secant function.

$$\sec^{-1}(-2)$$

5. Find the value of the inverse cosine function.

$$\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$$

6. Find the value of the inverse cosecant function.

$$\csc^{-1}(-\sqrt{2})$$

TRIG FUNCTIONS OF INVERSE TRIG FUNCTIONS

1. Find the value of the expression.

$$\sin\left(\tan^{-1}\left(\frac{1}{3}\right)\right)$$

2. Find the value of $\tan^{-1}(\sin \pi)$.

3. Find the value of the expression.

$$\csc\left(\cot^{-1}\left(\frac{1}{x}\right)\right)$$

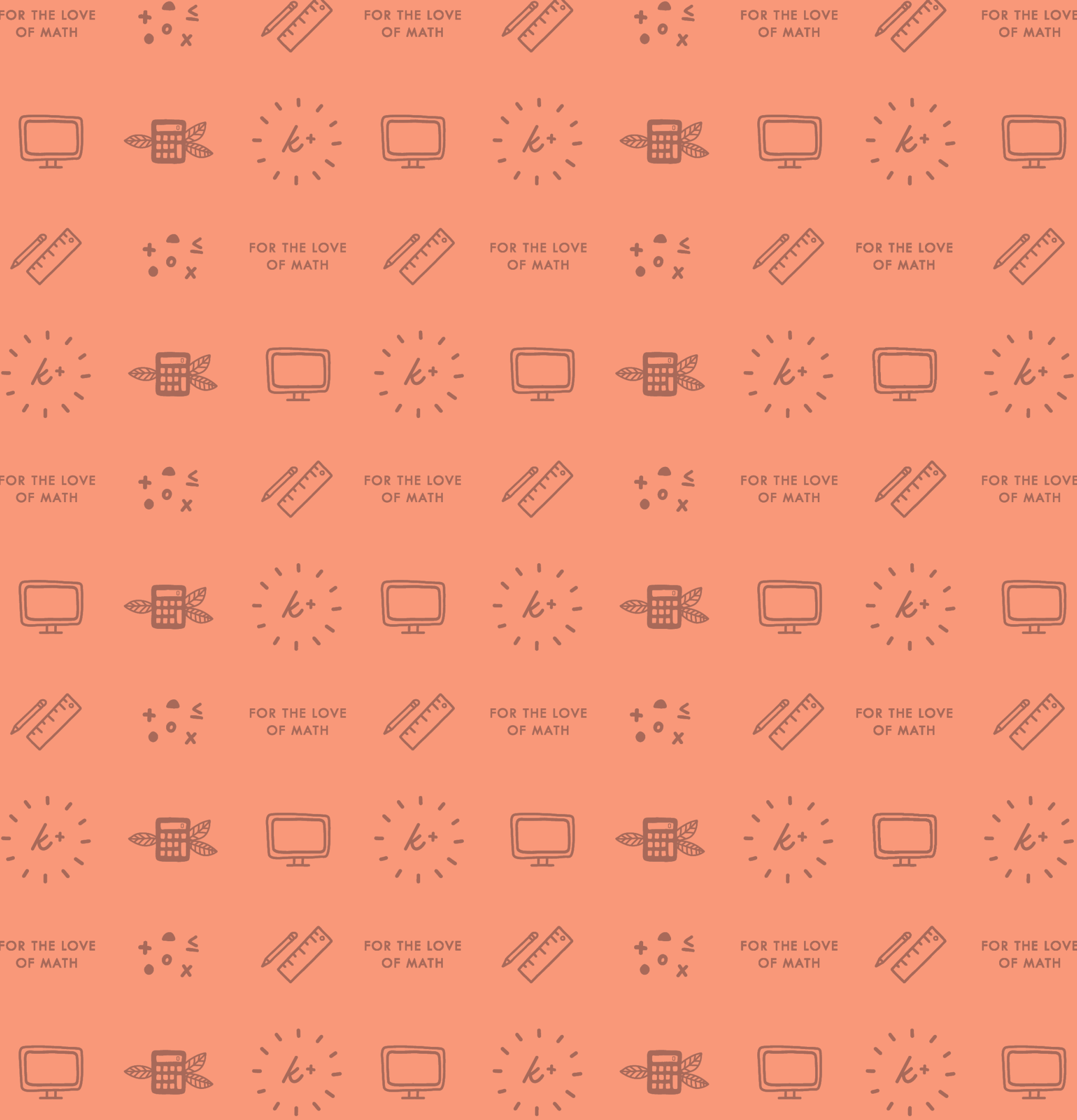
4. Find the value of the expression.

$$\cos\left(\sec^{-1}\left(-\frac{9}{2}\right)\right)$$

5. Find the value of the expression.

$$\cot\left[\cos^{-1}\left(\sin\left(\frac{\pi}{4}\right)\right)\right]$$

■ 6. A 16-foot ladder leans against a brick wall. The base of the ladder is 8 feet from the wall. Find the angle the ladder makes with the wall.



WWW.KRISTAKINGMATH.COM