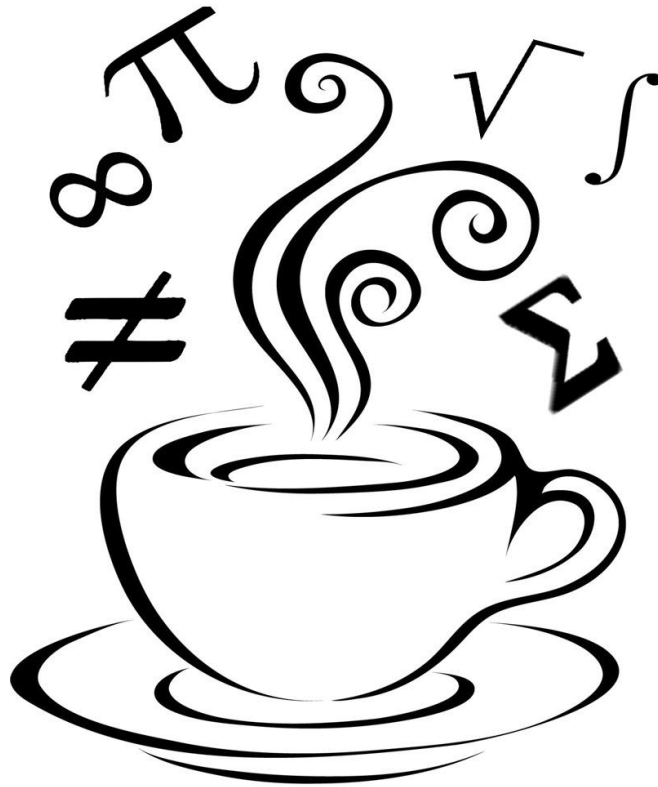


Two Steps Trig Equations on the  
Interval  $-\frac{\pi}{2} \leq \Theta \leq \frac{\pi}{2}$

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*Shari Bruyn & Associates*  
*Putting the Fun in the Fundamentals of Math*

## Equations - Two Steps

Solve each problem for  $-\frac{\pi}{2} \leq \Theta \leq \frac{\pi}{2}$ . Connect the solution(s) to the problem number on the next page to reveal a design.

1.  $5 + \csc \Theta = 3$

2.  $-4 = -4 + \cot \Theta$

3.  $7 \sin \Theta = -7$

4.  $-\cos \Theta = \frac{\sqrt{2}}{2}$

5.  $2 \sec \Theta = -1$

6.  $\frac{1}{10} \tan \Theta = \frac{-\sqrt{3}}{10}$

7.  $\frac{2}{5} \cos \Theta = \frac{\sqrt{2}}{5}$

8.  $\sqrt{2} \csc \Theta = -2$

9.  $5 \cot \Theta = \frac{5}{\sqrt{3}}$

10.  $\frac{-3}{\sqrt{2}} \sin \Theta = \frac{-\sqrt{2}}{3}$

11.  $6 \sin \Theta = 3\sqrt{2}$

12.  $-1 = -2 \cos \Theta$

13.  $\frac{-\sqrt{2}}{2} \sec \Theta = \frac{\sqrt{2}}{2}$

14.  $-\sqrt{3} \tan \Theta = -\sqrt{3}$

2  
\*

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

\*  $\frac{-\pi}{3}$

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

10\*11

4\*6

3\*13

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

\*  $\emptyset$

7\*

14\*1

12\*5

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

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

\*  $\frac{\pi}{3}$

8  
\*  
9

## Equations - Two Steps

Solve each problem for  $-\frac{\pi}{2} \leq \Theta \leq \frac{\pi}{2}$ . Connect the solution(s) to the problem number on the next page to reveal a design.

1.  $5 + \csc \Theta = 3$

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

2.  $-4 = -4 + \cot \Theta$

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

3.  $7 \sin \Theta = -7$

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

4.  $-\cos \Theta = \frac{\sqrt{2}}{2}$

$\emptyset$

5.  $2 \sec \Theta = -1$

$\emptyset$

6.  $\frac{1}{10} \tan \Theta = \frac{-\sqrt{3}}{10}$

$\frac{-\pi}{3}$

7.  $\frac{2}{5} \cos \Theta = \frac{\sqrt{2}}{5}$

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

8.  $\sqrt{2} \csc \Theta = -2$

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

9.  $5 \cot \Theta = \frac{5}{\sqrt{3}}$

$\frac{\pi}{3}$

10.  $\frac{-3}{\sqrt{2}} \sin \Theta = \frac{-\sqrt{2}}{3}$

$\frac{\pi}{2}$

11.  $6 \sin \Theta = 3\sqrt{2}$

$\frac{\pi}{4}$

12.  $-1 = -2 \cos \Theta$

$\frac{\pi}{3}$

13.  $\frac{-\sqrt{2}}{2} \sec \Theta = \frac{\sqrt{2}}{2}$

$\emptyset$

14.  $-\sqrt{3} \tan \Theta = -\sqrt{3}$

$\frac{\pi}{4}$

