

Basic Solving Trig

Date _____ Period _____

Solve each equation for $0 \leq \theta < 360$.

1) $\frac{1}{2} = \cos \theta$

2) $\frac{\sqrt{2}}{2} = \sin \theta$

3) $\tan \theta = \sqrt{3}$

4) $\cot \theta = 0$

5) $\frac{\sqrt{3}}{3} = \tan \theta$

6) $\cos \theta = \frac{\sqrt{2}}{2}$

Solve each equation for $0 \leq \theta < 2\pi$.

7) $\sin \theta = -\frac{\sqrt{2}}{2}$

8) $\tan \theta = -\frac{\sqrt{3}}{3}$

9) $\sec \theta = -\frac{2\sqrt{3}}{3}$

10) $2 = \csc \theta$

11) $\sqrt{2} = \sec \theta$

12) $\sin \theta = \frac{1}{2}$

Solve each equation for $180 \leq \theta \leq 360$.

13) $\sin \theta = 0$

14) $\cot \theta = -\frac{\sqrt{3}}{3}$

Solve each equation for $\pi \leq \theta \leq 2\pi$.

15) $\cos \theta = -\frac{\sqrt{3}}{2}$

16) $\sec \theta = -1$

Solve each equation for $-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$.

17) $\sin \theta = -\frac{1}{2}$

18) $\cot \theta = -1$

Solve each equation for $0 \leq \theta < 2\pi$.

19) $.8187 = \cot \theta$

20) $2.345 = \csc \theta$

21) $-3.1457 = \cot \theta$

22) $\cos \theta = -0.769$

23) $\sec \theta = 1$

24) $-0.173 = \sin \theta$

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Date _____ Period _____

Solve each equation for $0 \leq \theta < 360$.

1) $\frac{1}{2} = \cos \theta$

 $\{60, 300\}$

3) $\tan \theta = \sqrt{3}$

 $\{60, 240\}$

5) $\frac{\sqrt{3}}{3} = \tan \theta$

 $\{30, 210\}$

2) $\frac{\sqrt{2}}{2} = \sin \theta$

 $\{45, 135\}$

4) $\cot \theta = 0$

 $\{90, 270\}$

6) $\cos \theta = \frac{\sqrt{2}}{2}$

 $\{45, 315\}$ Solve each equation for $0 \leq \theta < 2\pi$.

7) $\sin \theta = -\frac{\sqrt{2}}{2} \left\{ \frac{5\pi}{4}, \frac{7\pi}{4} \right\}$

8) $\tan \theta = -\frac{\sqrt{3}}{3} \left\{ \frac{5\pi}{6}, \frac{11\pi}{6} \right\}$

9) $\sec \theta = -\frac{2\sqrt{3}}{3} \left\{ \frac{5\pi}{6}, \frac{7\pi}{6} \right\}$

10) $2 = \csc \theta \left\{ \frac{\pi}{6}, \frac{5\pi}{6} \right\}$

11) $\sqrt{2} = \sec \theta \left\{ \frac{\pi}{4}, \frac{7\pi}{4} \right\}$

12) $\sin \theta = \frac{1}{2} \left\{ \frac{\pi}{6}, \frac{5\pi}{6} \right\}$

Solve each equation for $180 \leq \theta \leq 360$.

13) $\sin \theta = 0$

 $\{180, 360\}$

14) $\cot \theta = -\frac{\sqrt{3}}{3}$

 $\{300\}$ Solve each equation for $\pi \leq \theta \leq 2\pi$.

15) $\cos \theta = -\frac{\sqrt{3}}{2} \left\{ \frac{7\pi}{6} \right\}$

16) $\sec \theta = -1$

 $\{\pi\}$ Solve each equation for $-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$.

17) $\sin \theta = -\frac{1}{2} \left\{ -\frac{\pi}{6} \right\}$

18) $\cot \theta = -1 \left\{ -\frac{\pi}{4} \right\}$

Solve each equation for $0 \leq \theta < 2\pi$.

19) $.8187 = \cot \theta$

 $\{.8848, 7.168\}$

21) $-3.1457 = \cot \theta$

 $\{-0.308, 2.834\}$

23) $\sec \theta = 1$

 $\{0\}$

20) $2.345 = \csc \theta$

 $\{0.441, 2.701\}$

22) $\cos \theta = -0.769$

 $\{2.448, 3.835\}$

24) $-0.173 = \sin \theta$

 $\{6.109, 2.968\}$