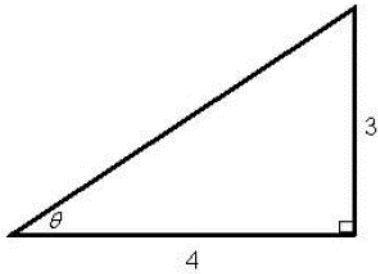


SM3 9.3: Right Triangle Trig & Reference Angles

Find the exact values of the six trigonometric functions of θ .

1)

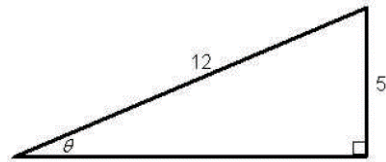


$$\sin \theta = \frac{3}{5} \quad \csc \theta = \frac{5}{3}$$

$$\cos \theta = \frac{4}{5} \quad \sec \theta = \frac{5}{4}$$

$$\tan \theta = \frac{3}{4} \quad \cot \theta = \frac{4}{3}$$

2)

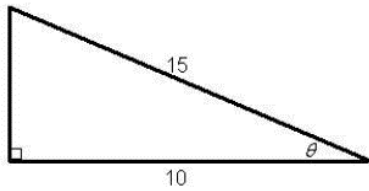


$$\sin \theta = \frac{5}{12} \quad \csc \theta = \frac{12}{5}$$

$$\cos \theta = \frac{\sqrt{119}}{12} \quad \sec \theta = \frac{12}{\sqrt{119}}$$

$$\tan \theta = \frac{5}{\sqrt{119}} \quad \cot \theta = \frac{\sqrt{119}}{5}$$

3)

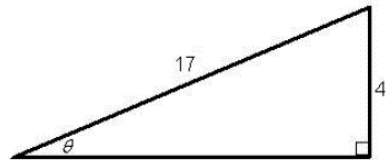


$$\sin \theta = \frac{10}{15} = \frac{2}{3} \quad \csc \theta = \frac{3}{2}$$

$$\cos \theta = \frac{\sqrt{5}}{3} \quad \sec \theta = \frac{3}{\sqrt{5}}$$

$$\tan \theta = \frac{2\sqrt{5}}{3} \quad \cot \theta = \frac{3}{2\sqrt{5}}$$

4)



$$\sin \theta = \frac{4}{17} \quad \csc \theta = \frac{17}{4}$$

$$\cos \theta = \frac{\sqrt{225}}{17} \quad \sec \theta = \frac{17}{\sqrt{225}}$$

$$\tan \theta = \frac{4}{\sqrt{225}} \quad \cot \theta = \frac{\sqrt{225}}{4}$$

5)

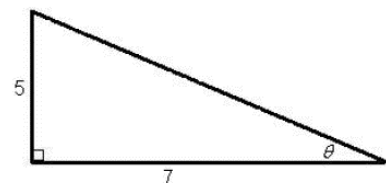


$$\sin \theta = \frac{4}{\sqrt{80}} \quad \csc \theta = \frac{\sqrt{80}}{4}$$

$$\cos \theta = \frac{8}{\sqrt{80}} \quad \sec \theta = \frac{\sqrt{80}}{8}$$

$$\tan \theta = \frac{4}{8} = \frac{1}{2} \quad \cot \theta = 2$$

6)



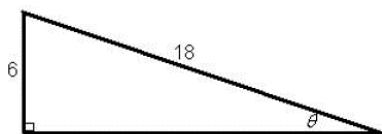
$$\sin \theta = \frac{5}{\sqrt{74}} \quad \csc \theta = \frac{\sqrt{74}}{5}$$

$$\cos \theta = \frac{7}{\sqrt{74}} \quad \sec \theta = \frac{\sqrt{74}}{7}$$

$$\tan \theta = \frac{5}{7} \quad \cot \theta = \frac{7}{5}$$

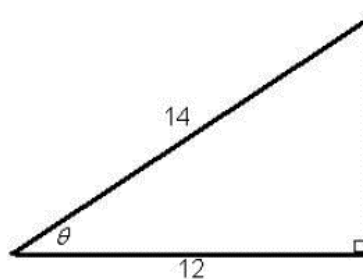
Determine the value of the indicated trig function.

7)



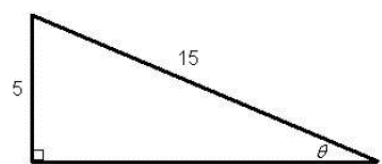
$$\sin \theta =$$

8)



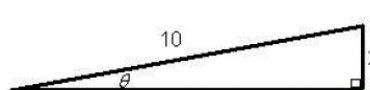
$$\tan \theta =$$

9)



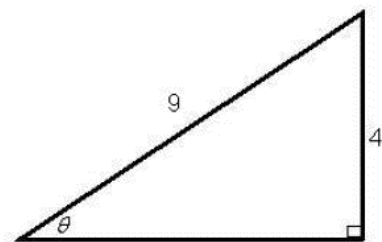
$$\cos \theta =$$

10)



$$\sec \theta =$$

11)



$$\csc \theta =$$

12)



$$\cot \theta =$$

For each of the following, find the reference angle θ' .

13) $\theta = 57^\circ$

14) $\theta = 113^\circ$

15) $\theta = \frac{7\pi}{6}$

16) $\theta = \frac{5\pi}{3}$

17) $\theta = -\frac{2\pi}{3}$

18) $\theta = 300^\circ$

$$19) \theta = -\frac{5\pi}{3}$$

$$20) \theta = 280^\circ$$

$$21) \theta = 1.2$$

$$22) \theta = 420^\circ$$

$$23) \theta = -60^\circ$$

$$24) \theta = -2$$

$$25) \theta = 100^\circ$$

$$26) \theta = -\frac{4\pi}{3}$$

$$27) \theta = \frac{11\pi}{6}$$

$$28) \theta = -135^\circ$$

$$29) \theta = \frac{17\pi}{6}$$

$$30) \theta = \frac{\pi}{3}$$