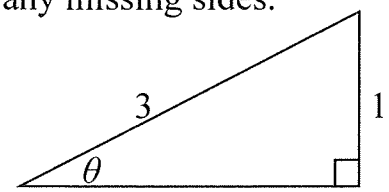
Name _____ Date _____

Practice 7.4: Trig Functions & Right Triangles

1. Find the ***exact*** value of the six trig functions of the angle θ. Use the Pythagorean thm to find any missing sides.

a.

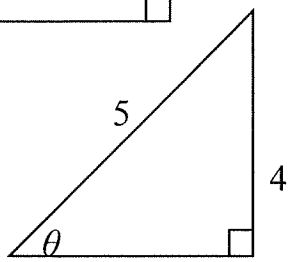


$\sin\theta =$ $\csc\theta =$

$\cos\theta =$ $\sec\theta =$

$\tan\theta =$ $\cot\theta =$

b.

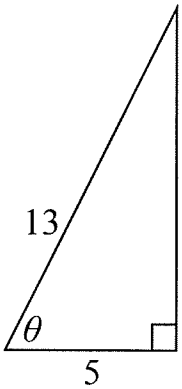


$\sin\theta =$ $\csc\theta =$

$\cos\theta =$ $\sec\theta =$

$\tan\theta =$ $\cot\theta =$

c.

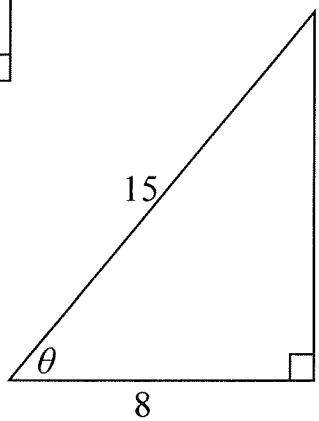


$\sin\theta =$ $\csc\theta =$

$\cos\theta =$ $\sec\theta =$

$\tan\theta =$ $\cot\theta =$

d.

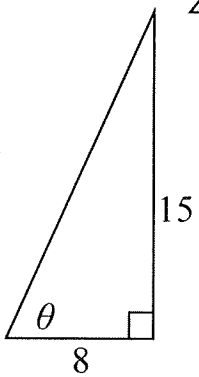


$\sin\theta =$ $\csc\theta =$

$\cos\theta =$ $\sec\theta =$

$\tan\theta =$ $\cot\theta =$

e.

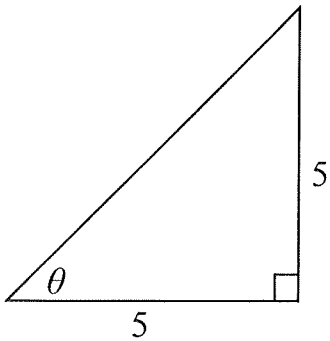


$\sin\theta =$ $\csc\theta =$

$\cos\theta =$ $\sec\theta =$

$\tan\theta =$ $\cot\theta =$

f.



$\sin\theta =$ $\csc\theta =$

$\cos\theta =$ $\sec\theta =$

$\tan\theta =$ $\cot\theta =$

2. Sketch a right triangle corresponding to the trig function of the angle θ. Use the Pythagorean thm to find the missing side and then find the indicated trig functions.

a. $\sin\theta = \frac{2}{3}$ **b.** $\cos\theta = \frac{5}{7}$ **c.** $\tan\theta = 3$ **d.** $\sec\theta = 2$

$\cos\theta =$	$\sin\theta =$	$\sin\theta =$	$\sin\theta =$
$\tan\theta =$	$\tan\theta =$	$\cos\theta =$	$\cos\theta =$
$\csc\theta =$	$\cot\theta =$	$\csc\theta =$	$\tan\theta =$

3. Use a calculator to evaluate the trig functions.

a. $\sin 10° =$ **b.** $\tan 50° =$ **c.** $\sec 89° =$ **d.** $\sin\frac{3\pi}{10} =$

e. $\cos 80° =$ **f.** $\cot 40° =$ **g.** $\csc 1° =$ **h.** $\cos\frac{2\pi}{10} =$

Use the value of the given function to evaluate the remaining ones.

4. $\sin 60° = \frac{\sqrt{3}}{2}$ **a.** $\tan 60° =$ **b.** $\sin 30° =$

$\cos 60° = \frac{1}{2}$ **c.** $\cos 30° =$ **d.** $\cot 60° =$

5. $\sin 30° = \frac{1}{2}$ **a.** $\csc 30° =$ **b.** $\cot 60° =$

$\tan 30° = \frac{\sqrt{3}}{3}$ **c.** $\cos 30° =$ **d.** $\cot 30° =$

6. $\csc\theta = 3$ **a.** $\sin\theta =$ **b.** $\cos\theta =$

$\sec\theta = \frac{3\sqrt{2}}{4}$ **c.** $\tan\theta =$ **d.** $\sec(90° - \theta) =$

7. $\sec\theta = 5$ **a.** $\cos\theta =$ **b.** $\cot\theta =$

$\tan\theta = 2\sqrt{6}$ **c.** $\sin\theta =$ **d.** $\cot(90° - \theta) =$