

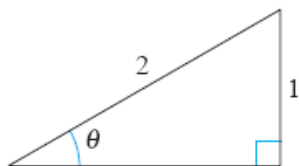
Name: \_\_\_\_\_

## Trigonometry Functions of Any Angle

1) Evaluate the trigonometric function.

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

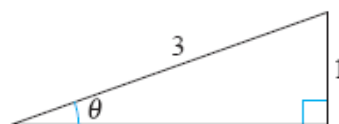
$\cos \theta = \square$



2)

$\sin \theta = \frac{1}{3}$

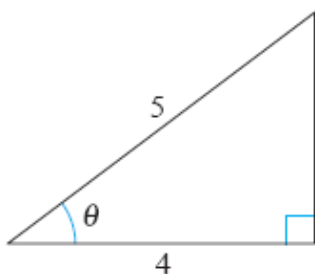
$\tan \theta = \square$



3)

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

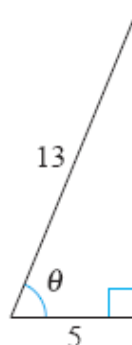
$\cot \theta = \square$



4)

$\sec \theta = \frac{13}{5}$

$\csc \theta = \square$



2) Evaluate the sine, cosine, and tangent of each angle *without* using a calculator.

1) a)  $60^\circ$

2) a)  $-30^\circ$

b)  $120^\circ$

b)  $150^\circ$

c)  $\frac{\pi}{4}$

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

d)  $\frac{5\pi}{4}$

d)  $\frac{\pi}{2}$

3) a)  $225^\circ$

4) a)  $750^\circ$

b)  $-225^\circ$

b)  $510^\circ$

c)  $\frac{5\pi}{3}$

c)  $\frac{10\pi}{3}$

d)  $\frac{11\pi}{6}$

d)  $\frac{17\pi}{3}$

3) Find the exact value of each expression:

1)  $\sin 30^\circ + \tan 45^\circ$

2)  $\cot 45^\circ + \cos 60^\circ \sin 30^\circ \cos 60^\circ + \cos 30^\circ \sin 60^\circ$

3)  $\cos 30^\circ \cos 60^\circ - \sin 30^\circ \sin 60^\circ$

4)  $\frac{\tan 60^\circ - \tan 30^\circ}{1 + \tan 60^\circ \tan 30^\circ}$

5)  $\frac{\csc 30^\circ + \csc 60^\circ + \csc 90^\circ}{\sec 0^\circ + \sec 30^\circ + \sec 60^\circ}$

6)  $[(\sin 60^\circ + \cos 30^\circ)^2 - (\cos 60^\circ + \sin 30^\circ)^2]^3$

7)  $(7\tan 405^\circ + 3\sin 1080^\circ)(49 \tan^2 405^\circ - 21 \tan 405^\circ \sin 1080^\circ + 9\sin^2 1080^\circ)$