

# C\_09 Key and Trig Practice #1

Wednesday, October 3, 2018 4:03 PM



C\_09 Trig Practice

## Trigonometry Practice - #1

1. Write the definitions for the six trigonometric ratios. The first one is already done for you.

$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

2. Find two coterminal angles to each angle below. Give one positive coterminal angle and one negative coterminal angle.

a)  $450^\circ$

b)  $-84^\circ$

c)  $1032^\circ$

3. Change the degree measures to radians. Give answers as both exact and approximate measures correct to one decimal place.

a)  $150^\circ$

b)  $310^\circ$

c)  $-80^\circ$

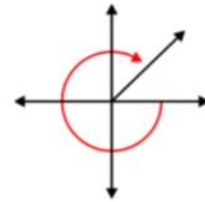
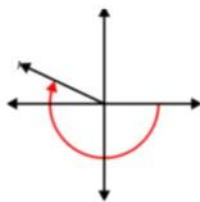
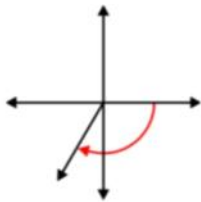
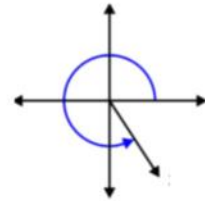
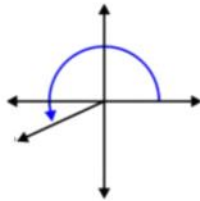
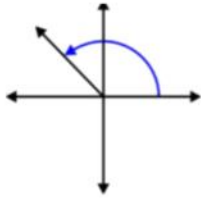
4. Change the radian measures to degrees. Round to two decimal places if necessary.

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

b)  $-\frac{5\pi}{6}$

c)  $\frac{13\pi}{4}$

5. Label each angle below with its measure in degrees (just give an estimate).

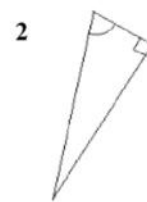
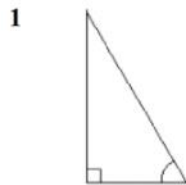


6. Write an expression that gives *all* angles coterminal to each given angle.

a)  $75^\circ$

b)  $\frac{\pi}{3}$

7. Label each triangle below with "A" for adjacent, "O" for opposite and "H" for hypotenuse.



# Key

## Trigonometry Practice - #1

1. Write the definitions for the six trigonometric ratios. The first one is already done for you.

$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\csc \theta = \frac{\text{hyp}}{\text{opp}}$$

$$\sec \theta = \frac{\text{hyp}}{\text{adj}}$$

$$\cot \theta = \frac{\text{adj}}{\text{opp}}$$

2. Find two coterminal angles to each angle below. Give one positive coterminal angle and one negative coterminal angle.

a)  $450^\circ$

$$450^\circ + 360^\circ = 810^\circ$$

$$450^\circ - 2(360^\circ) = -270^\circ$$

b)  $-84^\circ$

$$-84^\circ + 360^\circ = 276^\circ$$

$$-84^\circ - 360^\circ = -444^\circ$$

c)  $1032^\circ$

$$1032^\circ + 360^\circ = 1392^\circ$$

$$1032^\circ - 3(360^\circ) = -48^\circ$$

3. Change the degree measures to radians. Give answers as both exact and approximate measures correct to one decimal place.

a)  $150^\circ$

exact

$$150^\circ \times \frac{\pi}{180^\circ} = \frac{15\pi}{18} = \frac{5\pi}{6}$$

approx

$$\frac{150\pi}{180} \doteq 2.6 \text{ rad}$$

b)  $310^\circ$

$$310^\circ \times \frac{\pi}{180^\circ} = \frac{31\pi}{18}$$

$$\frac{310\pi}{180} \doteq 5.4 \text{ rad}$$

c)  $-80^\circ$

$$-80^\circ \times \frac{\pi}{180^\circ} = -\frac{8\pi}{18} = -\frac{4\pi}{9}$$

$$-\frac{80\pi}{180} \doteq -1.4 \text{ rad}$$

4. Change the radian measures to degrees. Round to two decimal places if necessary.

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

$$\frac{4\cancel{\pi}}{5} \times \frac{180^\circ}{\cancel{\pi}} = 144^\circ$$

b)  $-\frac{5\pi}{6}$

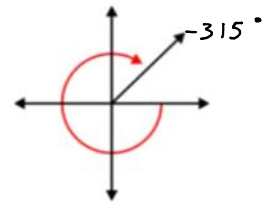
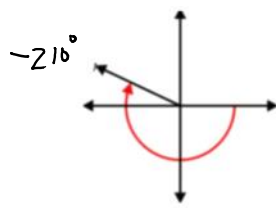
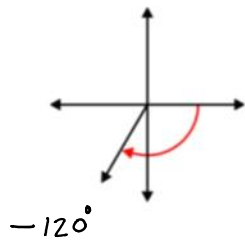
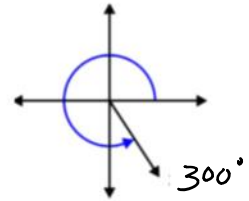
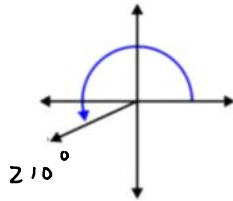
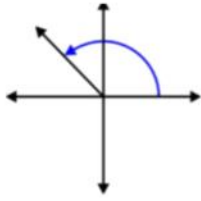
$$-\frac{5\cancel{\pi}}{6} \times \frac{180^\circ}{\cancel{\pi}} = -150^\circ$$

c)  $\frac{13\pi}{4}$

$$\frac{13\cancel{\pi}}{4} \times \frac{180^\circ}{\cancel{\pi}} = 585^\circ$$

5. Label each angle below with its measure in degrees (just give an estimate).

135°



6. Write an expression that gives *all* angles coterminal to each given angle.

a) 75°

$$75^\circ + 360^\circ n, n \in \mathbb{I}$$

b)

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

$$\frac{\pi}{3} + 2\pi n, n \in \mathbb{I}$$

7. Label each triangle below with "A" for adjacent, "O" for opposite and "H" for hypotenuse.

