1 radian = 50 +

1 radian

RADIAN: Angle that incluses 1 radius of distance on the edge of the circle

$360° = 2\pi$

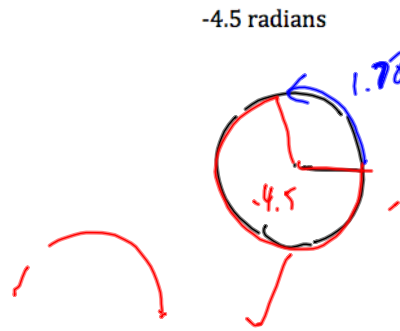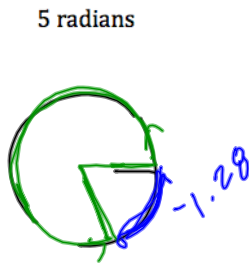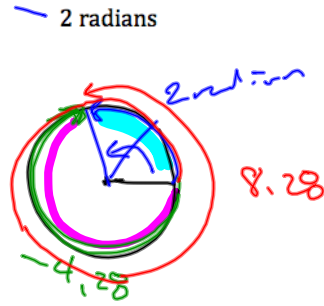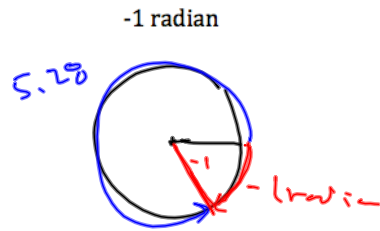How many radians make up the circumference of a circle?

2

3

1

4

2π
or
6.28

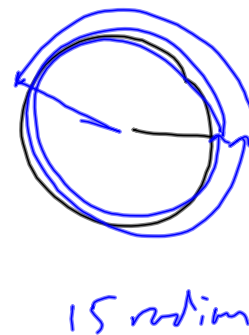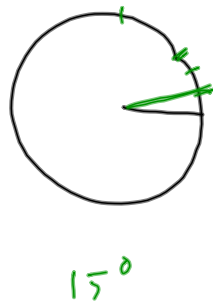5

6

Circumfrnce $= \pi d$

$C = \pi 2r.$

$C = 2\pi \cdot r$

6.28

EX #1: Draw each angle. Include an arrow representing the amount of rotation. Find the measure of one other angle that is coterminal with the given angle. Give the quadrant of each angle.

-1 radian

2 radians

5.28

-1

-1 radian

2 radian
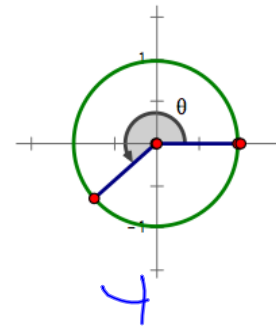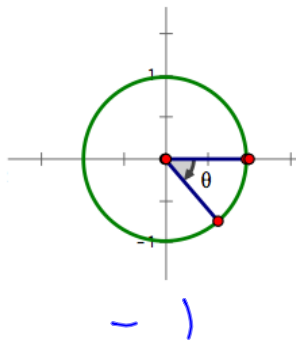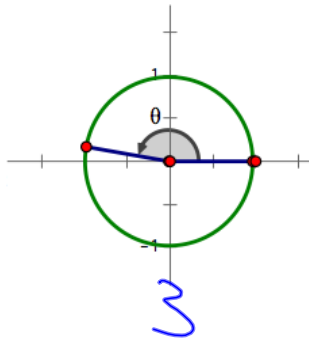
8.28

-4.28

5 radians

-4.5 radians

-1.28

1.78

-4.5

If no unit of angle measure is specified, then the angle is understood to be measured in radians.

EX #2: Draw the angle of 15° and an angle of 15.

15°

15 radian

EX #3: Each angle θ is an integer when measured in radians. Give the radian measure of the angle.

3

-1

4

EX #4: Draw each degree measure. Convert each degree measure to radians. Leave your answer in terms of π.

a. $135°$ $\dfrac{\pi}{180}$

$$\dfrac{3\pi}{4}$$

b. $200°$, $\dfrac{\pi}{180}$

$$\dfrac{20\pi}{18}$$

$$\dfrac{10\pi}{9}$$

c. $-300°$ · $\dfrac{\pi}{180}$

$$-\dfrac{5\pi}{3}$$

EX #5: Convert each radian measure into degrees.

a. $\dfrac{5\pi}{6} \cdot \dfrac{\overset{30}{180°}}{\pi}$

$150°$

b. $\dfrac{4\pi}{3} \cdot \dfrac{\overset{60}{180}}{\pi}$

$240°$

c. $4 \cdot \dfrac{180}{\pi}$

$\dfrac{720}{\pi}$

Assignment: pg. 739 #1-6, 7, 10, 11, 14, 27, 28, 31, 39