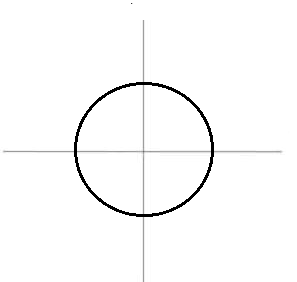
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**Converting Degrees to Radians HW 2016-2017**

**1.** Explain how arc length is used to convert degrees to radians. Use the conversion of 210ᵒ to .

**2.** Explain how arc length is used to convert degrees to radians. Use the conversion of 270ᵒ to .

**3. In the circle with center C, with the central angle ACD measuring radians complete the following:**

**a**. Sketch the angle.

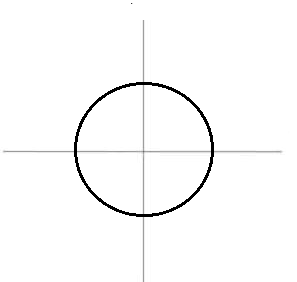
**b.** Shade in the portion of the circle which is radians.

Is the shaded region larger or smaller than radians.

**c.** What fraction of the area of circle has been shaded?

Explain how you came to fine your answer mathematically.

**4. In the circle with center C, with the central angle ACD measuring radians complete the following:**



**a.** Sketch the angle.

**b**. Shade in the portion of the circle which is radians.

Is the shaded region larger or smaller than radians.

**c.** What fraction of the area of circle has been shaded?

Explain how you came to fine your answer mathematically.

**With the unit circle having the radius of one unit, finding the arc length is converting the degrees to radian measure**

**5.** Convert the central angle with measure 135 to radians.

**6.** Convert the central angle with measure 330 to radians.

**7.** Convert radians to degrees.

**8.** Convert radians to degrees.

**9.** Convert radians to degrees.

**10.** Convert radians to degrees.

**11.** The traditional method of converting radians to degrees is to multiply the radian by . Explain WHY this method works.