Inspiring Greatness

ISD

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

Geometry/Honors Geometry

May 15, 2020

Geometry/Honors Geometry
Lesson: May 15, 2020

Objective/Learning Target:

Students will solve problems involving circles (review of circle concepts).

Warm-Up:

Identify the center and radius of each.

1) $(x-2)^2+(y-2)^2=9$

2) $(x+1)^2+(y-4)^2=1$

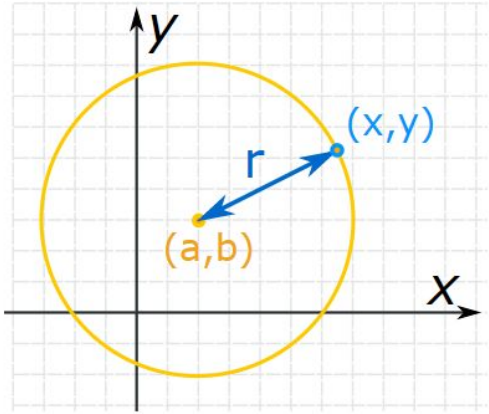
Warm-Up Answers

1) Center: (2, 2)
Radius: 3

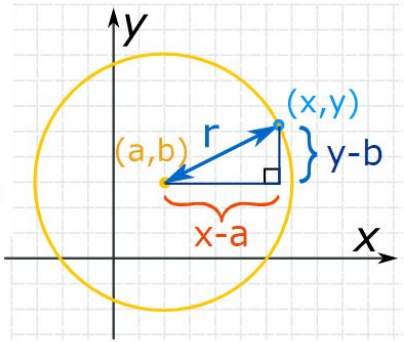
2) Center: (–1, 4)
Radius: 1

More General Case

Now let us put the center at **(a,b)**



So the circle is **all the points (x,y)** that are **"r"** away from the center **(a,b)**.



It is the same idea as before, but we need to subtract **a** and **b**:

$$(x-a)^2 + (y-b)^2 = r^2$$

And that is the **"Standard Form"** for the equation of a circle!

Central angle in degrees

The formula the arc measure is:

$$arc\ length = 2\pi R\left(\frac{C}{360}\right)$$

where:

C is the central angle of the arc in degrees

R is the radius of the arc

π is Pi, approximately 3.142

Given the radius of a circle, the area inside it can be calculated using the formula

$$Area = \pi R^2$$

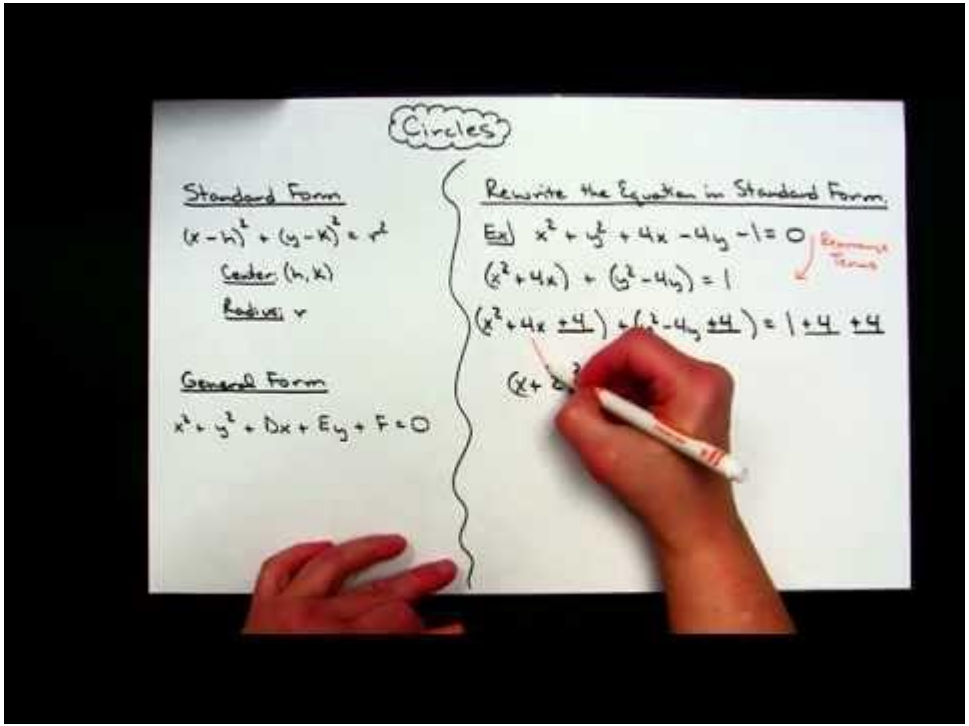
where:

R is the radius of the circle

π is Pi, approximately 3.142

Information

Please watch the following examples:First Video: Examples of finding the Measure of an arc length



Practice:Click on the link and work on the questions provided to review Circle concepts

Answers

1) C
2) C
3) K
4) K
5) D
6) D
7) G

Additional Practice

Khan Academy Practice

Click on the link and practice 10 problems. Look at the explanation if you make a mistake: IXL Review #1, #2, #3