

Oct 30-7:49 AM

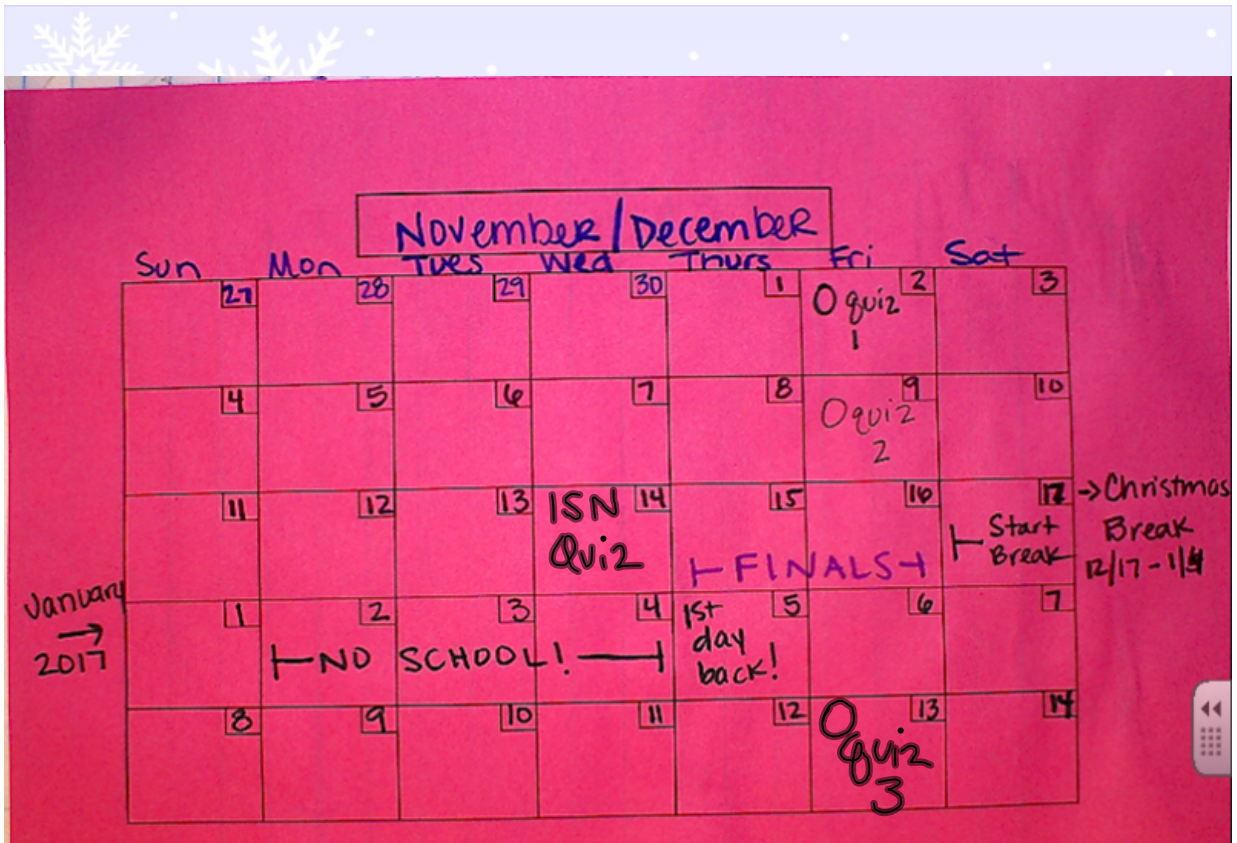
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Strand  
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TITLE:  
Circles


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Oct 30-8:00 AM

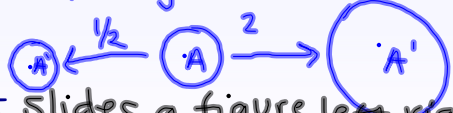



Nov 28-7:53 AM

WWK:

circle- a set of points all equidistant from a given center. named by its center 

radius- a line segment from the center of a circle to any point on the circle.   $\overline{X2}$  &  $\overline{X4}$  are radii

dilation- a scale model of a figure that is proportionally larger or smaller.  $A \rightarrow A'$  

translation- Slides a figure left, right, up or down without changing the size or shape. 

Oct 30-8:01 AM

TOC pg 56 Equation of a Circle

$$(x-h)^2 + (y-k)^2 = r^2$$

$(h, k)$  center  
 $r$  radius  
 $\sqrt{r^2} = r$

$x^2 + y^2 = 9$   
 center  $(0, 0)$   
 $r = \sqrt{9} = 3$

$(x-4)^2 + (y-1)^2 = 25$   
 center  $(4, 1)$   
 radius  $r = 5$

$(x+7)^2 + (y-1)^2 = 81$   
 center  $(-7, 1)$   
 $r = \sqrt{81} = 9$

$x^2 + y^2 = 144$   
 center  $(0, 0)$   
 $r = \sqrt{144} = 12$

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TOC pg 56 Equation of a Circle

$$(x-3)^2 + (y-2)^2 = 16$$

center  $(3, 2)$   
 $r = \sqrt{16} = 4$

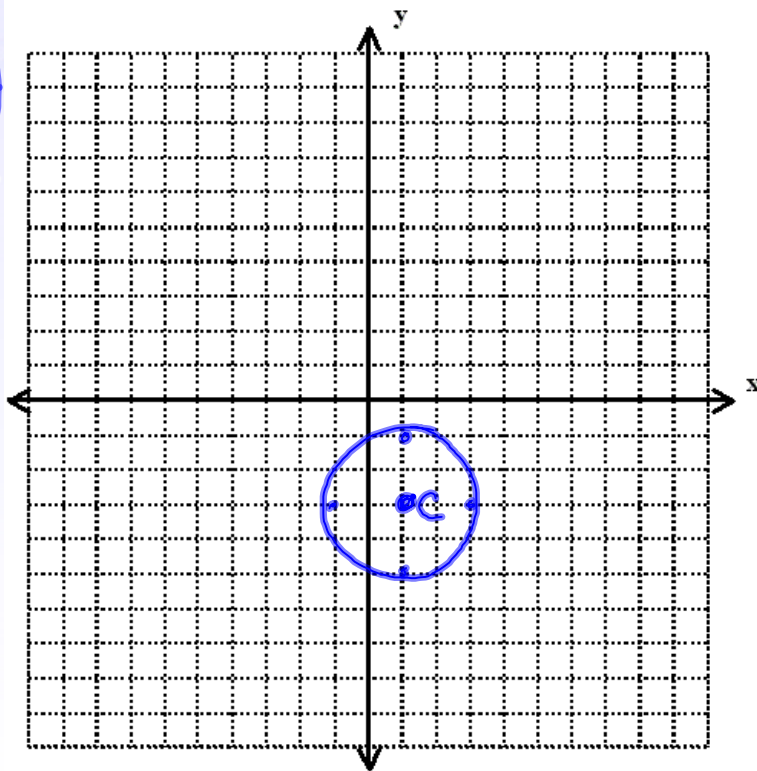
Oct 30-8:03 AM

## TOC pg 56 Equation of a Circle

$$(x-1)^2 + (y+3)^2 = 4$$

$$(1, -3) \text{ C}$$

$$r = \sqrt{4} = 2$$



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### Part I

### HW:

Identify the coordinates of the center and the length of the radius in the circles below.

1)  $(X - 1)^2 + (y - 3)^2 = 9$

radius:

Center: (\_\_, \_\_)

2)  $(X + 14)^2 + (y - 5)^2 = 16$

radius:

Center: (\_\_, \_\_)

3)  $(X - 5)^2 + (y - 1)^2 = 25$

radius:

Center: (\_\_, \_\_)

### Part 2

Write the equation of the circle with the given radius and center:

4) C (5, -6) radius = 3

5) C (0, 0) radius = 8

6) C (2, 4) radius = 1

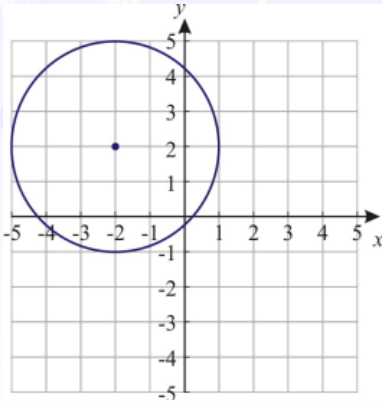
Graph all 6 circles on one piece of graph paper... divide it into 4 sections and graph one in each section on the front, then the last two on the back.

Oct 30-9:11 AM

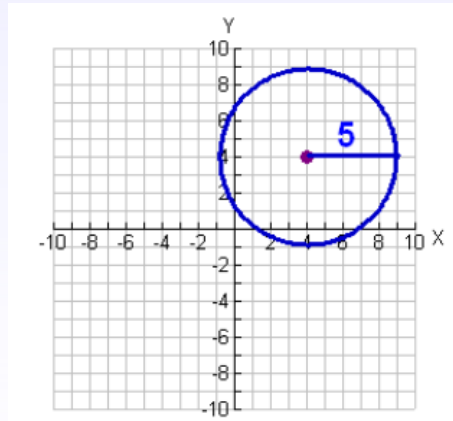
Welcome! Please grab your ISN and have a seat!

Give the equation of each circle. Write it on the back of your homework for a grade!!

1



2



Nov 2-10:27 AM

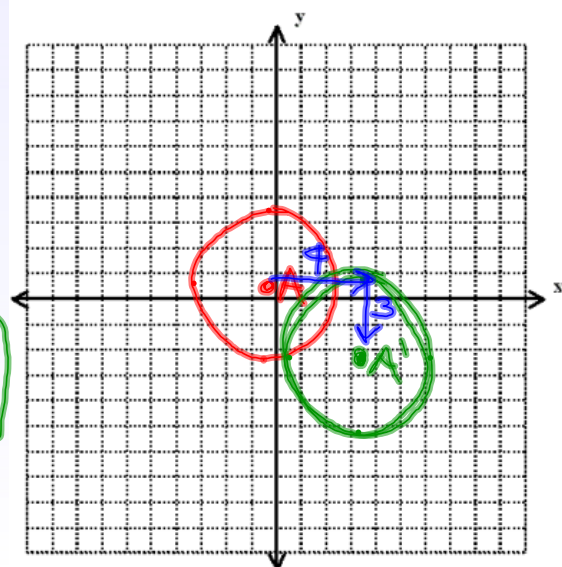
### TOC pg 55 Equation of a Circle

T  
R  
A  
N  
S  
L  
A  
T  
I  
O  
N

Graph  $\odot A$   $x^2 + y^2 = 9$ . Then, translate  $\odot A$  right 4 units and down 3 units. Write the new equation of  $\odot A'$ .

$$\odot A \quad x^2 + y^2 = 9 \\ (0, 0) \quad r = 3$$

$$\odot A' \quad (4, -3) \quad r = 3 \\ (x - 4)^2 + (y + 3)^2 = 9$$



Oct 30-8:03 AM

D  
I  
L  
A  
T  
I  
O  
N

Graph  $\odot K$   $(x+1)^2 + y^2 = 4$ . Dilate  $\odot K$  by a factor of 3. Write the new equation of  $\odot K'$ .

$\odot K$   $(x+1)^2 + y^2 = 4$

$K(-1, 0) \quad r=2$

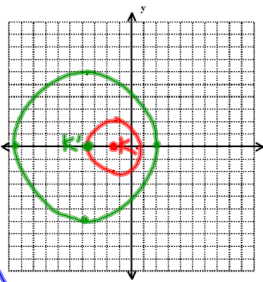
$\times 3 \times 3 \quad \times 3$

$K'(-3, 0) \quad r=6$

$(x+3)^2 + (y-0)^2 = 36$

$(x+3)^2 + y^2 = 36$

$\odot K'$



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	$\odot A'$ Translate	$\odot A''$ Dilate
$\odot A (x-1)^2 + (y+2)^2 = 9$	$\langle -3, 4 \rangle$	$S=2$
$\odot B x^2 + (y-1)^2 = 16$	$\langle 7, -5 \rangle$	$S=\frac{1}{2}$
$\odot C (x+2)^2 + (y+2)^2 = 1$	$\langle 2, 0 \rangle$	$S=3$
$\odot D (x-6)^2 + (y+9)^2 = 81$	$\langle -4, -4 \rangle$	$S=\frac{1}{3}$

$\odot A$

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

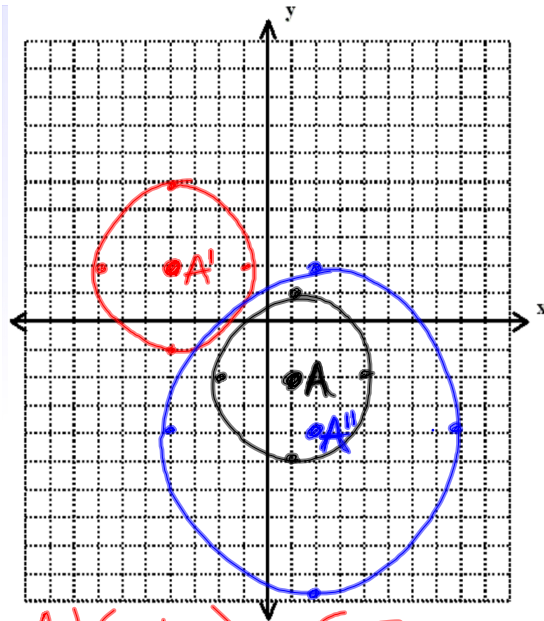
$A(1, -2) \quad r=3$

$\times 2 \times 2 \quad \times 2$

$A''(2, -4) \quad r=6$

$\odot A'' (x-2)^2 + (y+4)^2 = 36$

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$$A'(-4, 2) \quad r=3$$
$$(x+4)^2 + (y-2)^2 = 9 \quad OA'$$

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