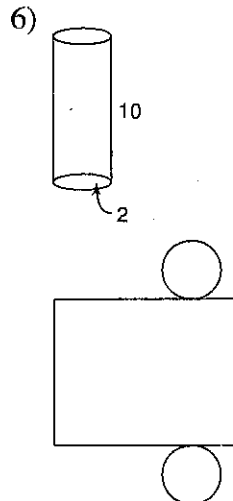
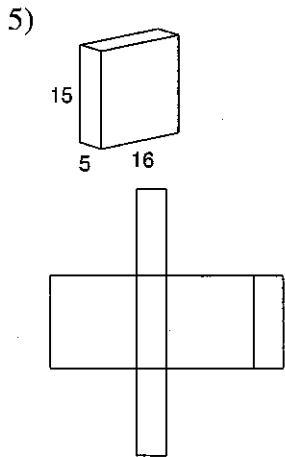
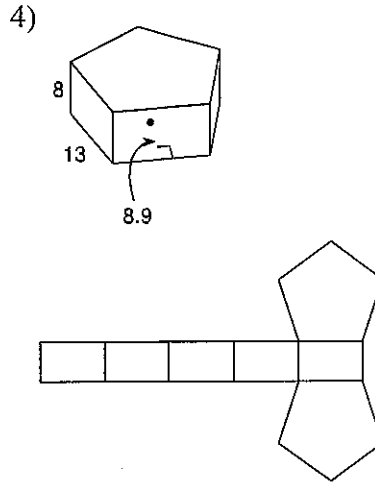
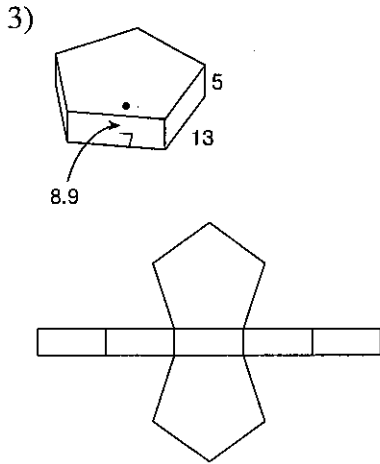
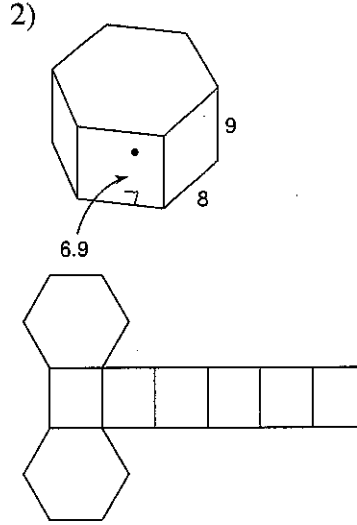
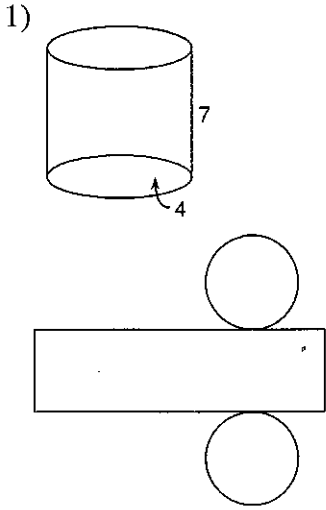


DATE	TOPIC
Monday April 11	Surface Area-Prisms and Cylinders -Notes page 1 -Classwork/HW page 2
Tuesday April 12	Surface Area- Cones and Square Pyramids -Classwork/HW pages 3-4
Wednesday April 13	Surface Area- Spheres -Classwork/HW pages 5-6
Thursday April 14	Distance Formula and Midpoint Formula -Classwork/HW pages 7-8
Friday April 15	Writing Equations of Circles -Notes page 9 -Classwork/HW page 10
Monday April 18	Writing Equations Cont'd -Notes pages 11-12 -Classwork/HW pages 13-15
Tuesday April 19	Writing Equations and Graphing Circles -Classwork/HW pages 16-19
Wednesday April 20	QUIZ
Thursday April 21	Constructions- Inscribed Circles
Friday April 22	Constructions- Circumscribed Circles
Monday April 25	Constructions- Tangent Line
Tuesday April 26	Constructions- Mixed Review
Wednesday April 27	Review Day
Thursday April 28	TEST
Friday April 29	Independent Probability
Monday May 2	Conditional Probability
Tuesday May 3	Angles (vertical, liner, parallel lines cut by transversals)
Wednesday May 4	Transformations (reflections, rotations, translations)
Thursday May 5	Congruent and Similar Triangles
Friday May 6	Right Triangle Trig (45-45-90, 30-60-90, sin, cos, tan)
Monday May 9	Unit 4A- Central and Inscribed Angles Circles
Tuesday May 10	PRACTICE TEST
Wednesday May 11	EOCT
	Two-way Tables and Probability of Compound Events

Surface Area of Prisms and Cylinders

Copy the measurements given onto the net of each solid.



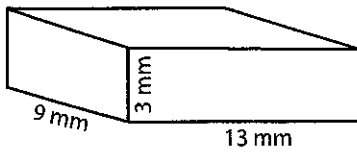
Name : _____

Score : _____

Surface Area - Rectangular Prism

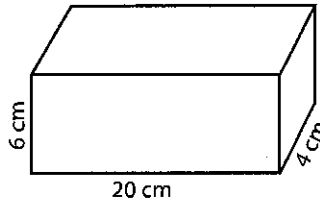
Find the surface area of each rectangular prism.

1)



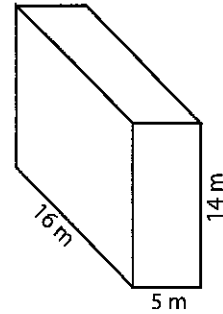
Surface Area = _____

2)



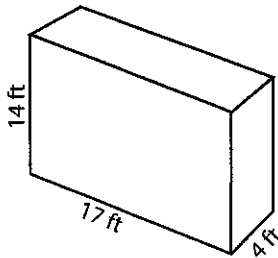
Surface Area = _____

3)



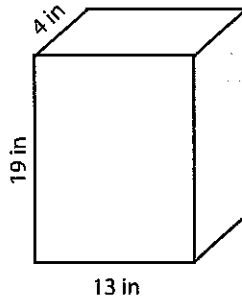
Surface Area = _____

4)



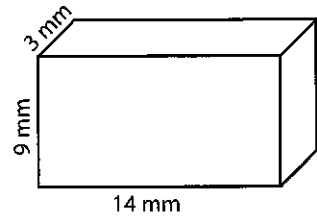
Surface Area = _____

5)



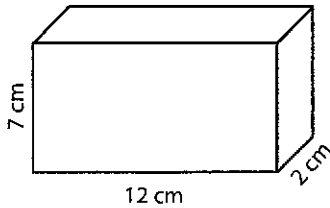
Surface Area = _____

6)



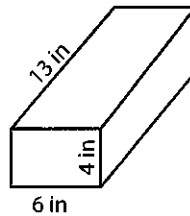
Surface Area = _____

7)



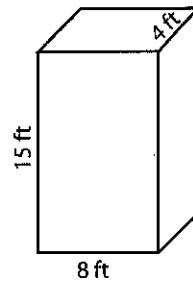
Surface Area = _____

8)



Surface Area = _____

9)



Surface Area = _____

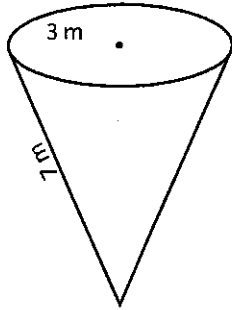
10) A gift box in the shape of a rectangular prism has 20 centimeters length, 14 centimeters width and 10 centimeters height. How much the paper will you need to wrap the gift box?

Surface Area = _____

Surface Area - Cone

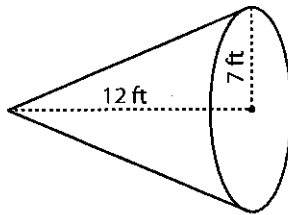
Find the surface area of each cone. Round the answer to nearest tenth. (use $\pi = 3.14$)

1)



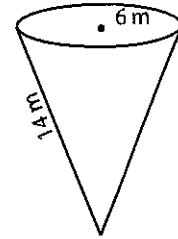
Surface Area = _____

2)



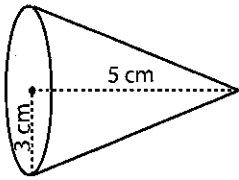
Surface Area = _____

3)



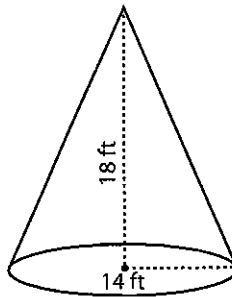
Surface Area = _____

4)



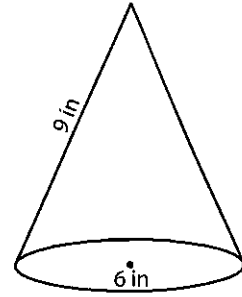
Surface Area = _____

5)



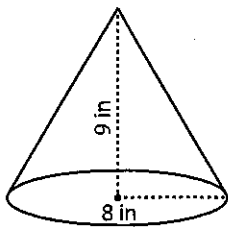
Surface Area = _____

6)



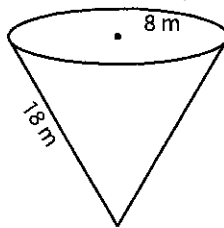
Surface Area = _____

7)



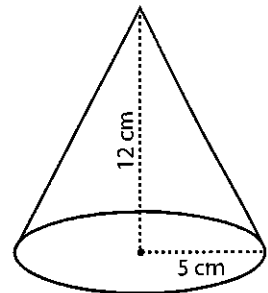
Surface Area = _____

8)



Surface Area = _____

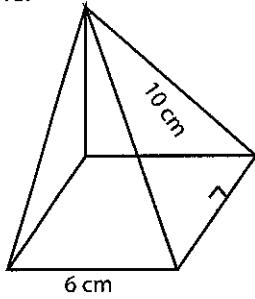
9)



Surface Area = _____

Surface Area - Square Pyramid

Example:



$$\text{Surface area} = \text{base area} + \frac{1}{2} \times \text{perimeter} \times \text{slant height}$$

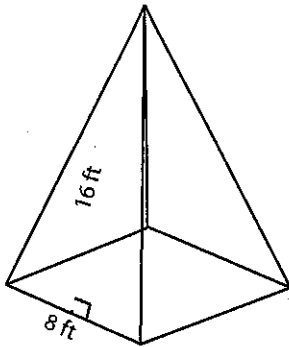
$$\text{Base area} = \text{side} \times \text{side} = 6 \times 6 = 36 \text{ cm}^2$$

$$\text{Perimeter} = 4 \times \text{side} = 4 \times 6 = 24 \text{ cm}$$

$$\begin{aligned} \text{Surface area} &= 36 + \frac{1}{2} \times 24 \times 10 \\ &= 156 \text{ cm}^2 \end{aligned}$$

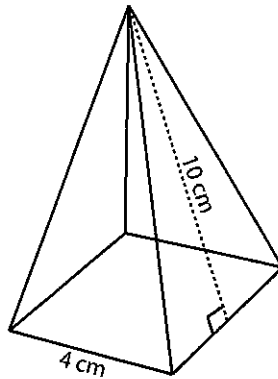
Find the surface area of each square pyramid.

1)



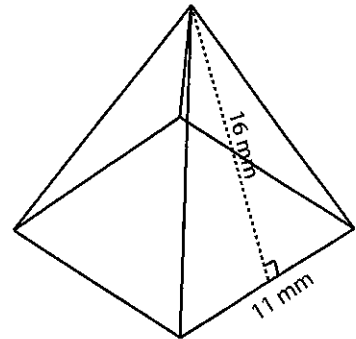
Surface Area = _____

2)



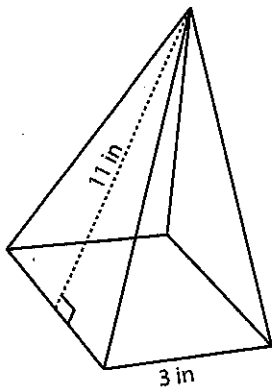
Surface Area = _____

3)



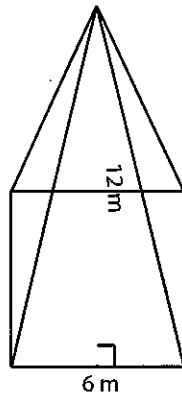
Surface Area = _____

4)



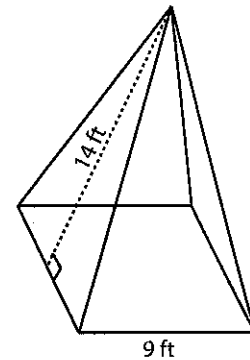
Surface Area = _____

5)



Surface Area = _____

6)

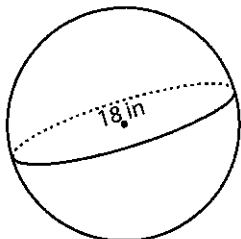


Surface Area = _____

Surface Area - Sphere & Hemisphere

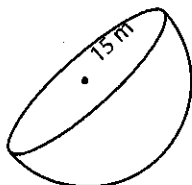
Find the exact surface area of each shape.

1)



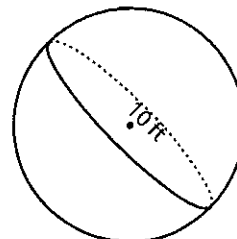
Surface Area = _____

2)



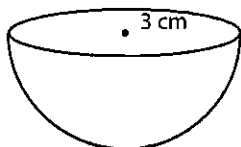
Surface Area = _____

3)



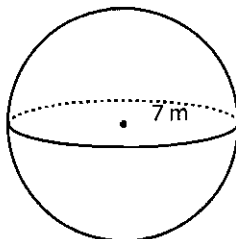
Surface Area = _____

4)



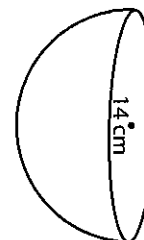
Surface Area = _____

5)



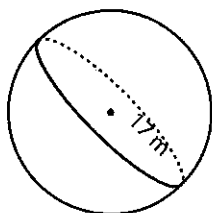
Surface Area = _____

6)



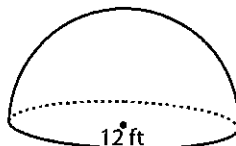
Surface Area = _____

7)



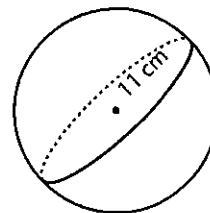
Surface Area = _____

8)



Surface Area = _____

9)

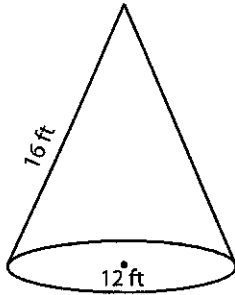


Surface Area = _____

Surface Area - Mixed Shapes

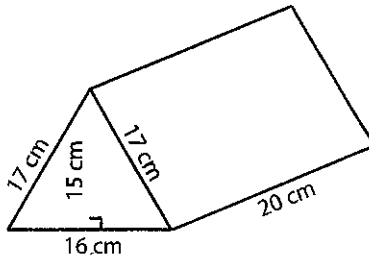
Find the exact surface area of each shape.

1)



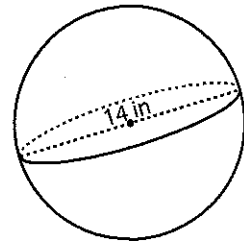
Surface Area = _____

2)



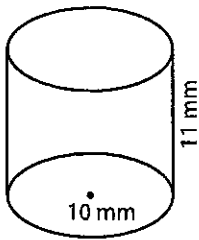
Surface Area = _____

3)



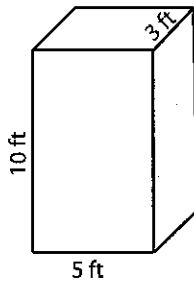
Surface Area = _____

4)



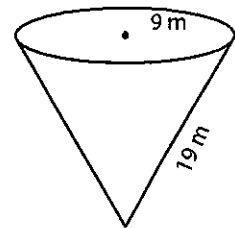
Surface Area = _____

5)



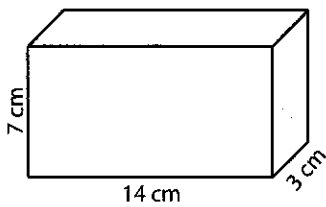
Surface Area = _____

6)



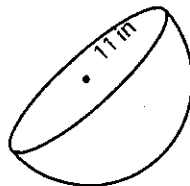
Surface Area = _____

7)



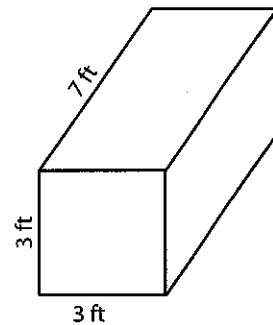
Surface Area = _____

8)



Surface Area = _____

9)

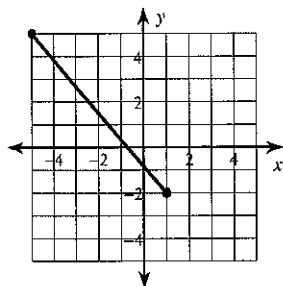


Surface Area = _____

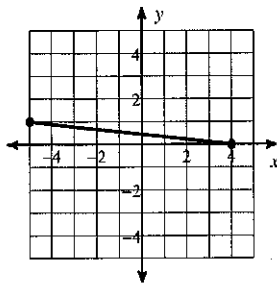
The Distance Formula

Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

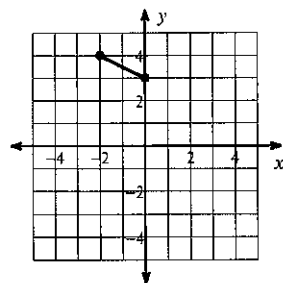
1)



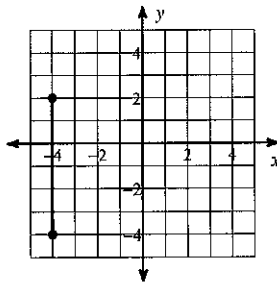
2)



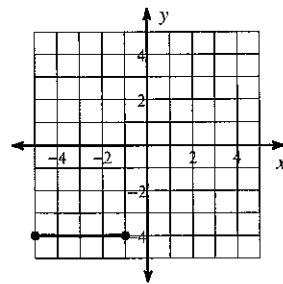
3)



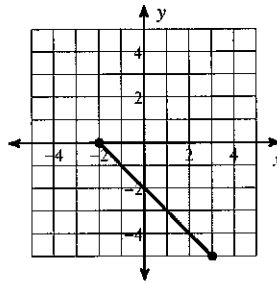
4)



5)



6)



7) $(-2, 3), (-7, -7)$

8) $(2, -9), (-1, 4)$

9) $(5, 9), (-7, -7)$

10) $(8, 5), (-1, 3)$

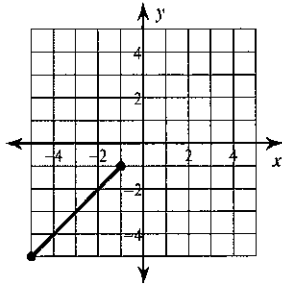
11) $(-10, -7), (-8, 1)$

12) $(-6, -10), (-2, -10)$

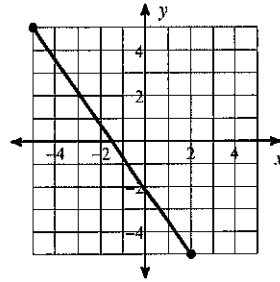
The Midpoint Formula

Find the midpoint of each line segment.

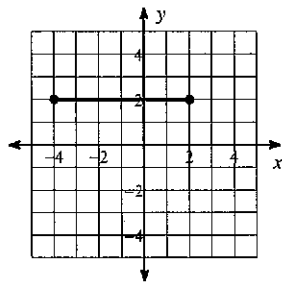
1)



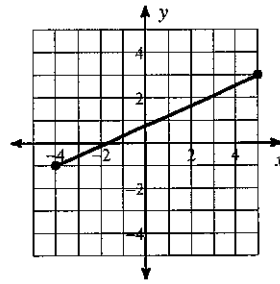
2)



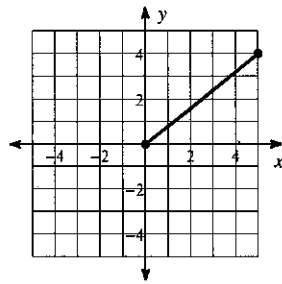
3)



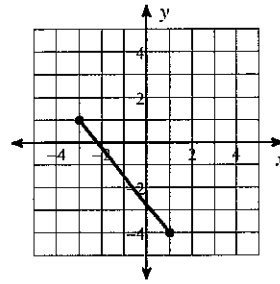
4)



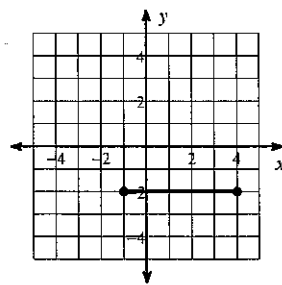
5)



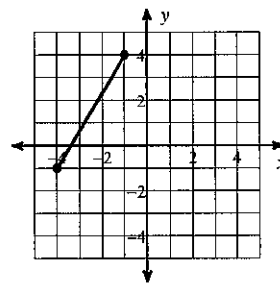
6)



7)



8)



Circles – Notes Day 1

General Form of the Equation of a Circle:

$$(\quad - \quad)^2 + (\quad - \quad)^2 = \quad^2$$

Center: (\quad , \quad) and radius = \quad

Given the center and radius, write the equation.

1. C (5, 2) r = 7

$$(\quad - \quad)^2 + (\quad - \quad)^2 = \quad^2$$

Equation: _____

2. C (-3, 4) r = $2\sqrt{5}$

$$(\quad - \quad)^2 + (\quad - \quad)^2 = \quad^2$$

Equation: _____

Given the center and another point on the circle, write the equation.

To find r^2 either plug in the point or use the distance formula, $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$.

3. C (4, -7) and (5, 3)

$$(\quad - \quad)^2 + (\quad - \quad)^2 = \quad^2$$

Equation: _____

Find r^2 by plugging in the point (\quad , \quad):

4. C origin and (-5, 2)

$$(\quad - \quad)^2 + (\quad - \quad)^2 = \quad^2$$

Equation: _____

Find r^2 using the distance formula:

3

Name: _____

Date: _____

Period: _____

Circles Worksheet Day #1

Write an equation of a circle given the following information.

	Center	Radius	Equation
1.	(2, -4)	4	_____
2.	(-7, 1)	15	_____
3.	(3, 0)	1/3	_____
4.	(-5, -3)	$3\sqrt{2}$	_____

Write an equation of each circle described below. Show work!

5. Given a circle with center (3, -4) and passing through (6, 2).
6. Given a circle with the center (5, 1) and a point on the circle (8, -2).
7. Given a circle with the center at the origin and passing through (4, 3).

Extension (*Hint: find the coordinates of the center first*)

8. Given a circle with (5, 1) and (3, -1) as the endpoints of the diameter.
9. Given a circle with (2, 1) and (6, -3) as the endpoints of the diameter.
10. Given a circle with (4, -3) and (2, 1) as the endpoints of the diameter.

Circles Notes Day 2

Part 1: Rewriting equation in standard form

If the quadratic equation isn't in the standard form for a circle:

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

we must first complete the square to get it in the correct form.

1. $x^2 + y^2 + 16x - 22y - 20 = 0$

Steps to complete the square.

First, prepare the terms:

- ✓ Group _____ and leave a space.
- ✓ Group _____ and leave a space.
- ✓ Move the constant and leave _____

Then, complete the square:

- ✓ $\frac{1}{2}$ the linear term and square it.
- ✓ Add to both sides.
- ✓ Do this for both x and y.
- ✓ Factor and simplify.

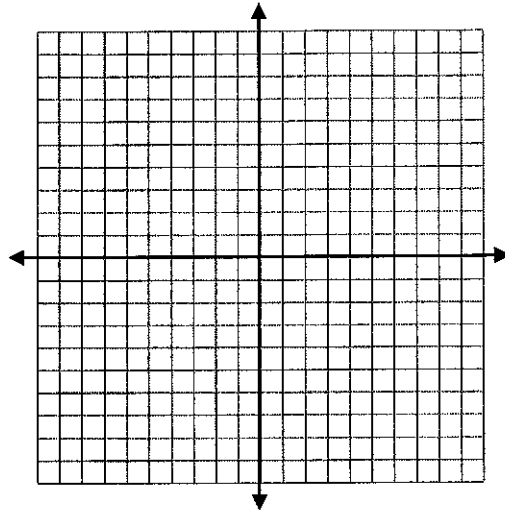
2. $x^2 + y^2 - 12x + 8y + 32 = 0$

Part 2: Graphing Circles

1. $(x)^2 + (y)^2 = 36$

$C = (\quad , \quad)$

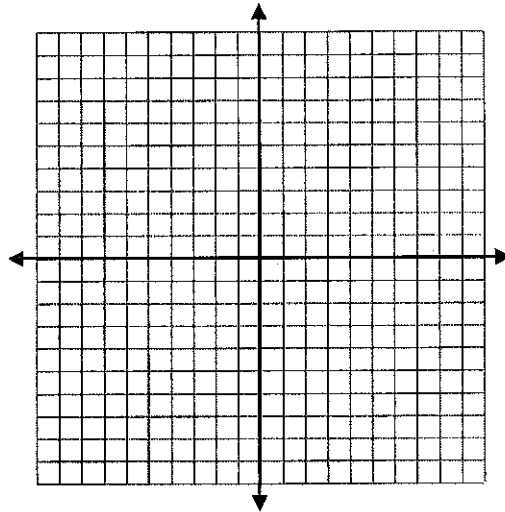
$r = \underline{\hspace{2cm}}$



2. $(x-3)^2 + (y-4)^2 = 25$

$C = (\quad , \quad)$

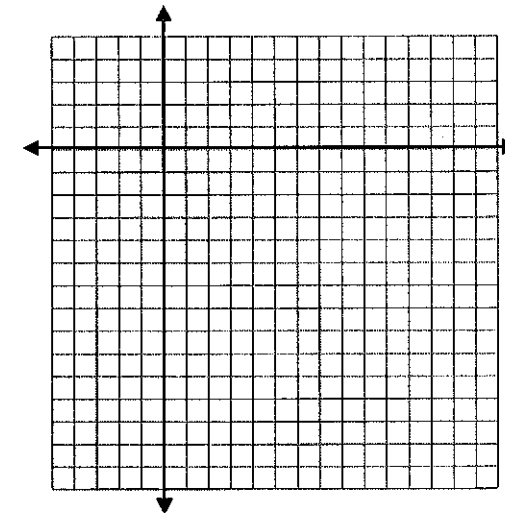
$r = \underline{\hspace{2cm}}$



3. $(x-5)^2 + (y+4)^2 = 41$

$C = (\quad , \quad)$

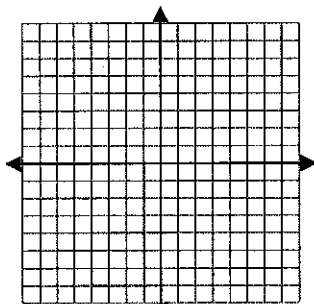
$r = \underline{\hspace{2cm}}$



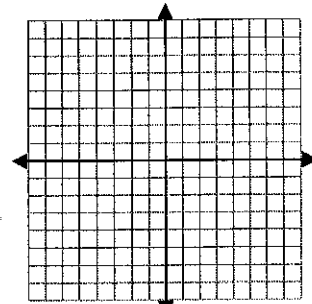
Circles Worksheet Day #2

Put each equation in standard form and graph the circle.

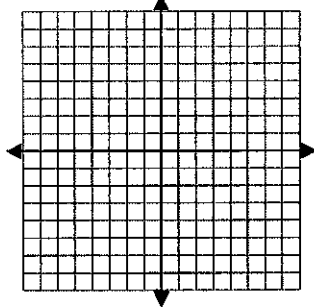
1. $x^2 = 9 - y^2$



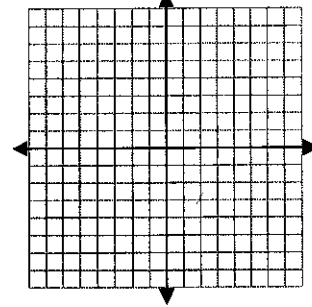
2. $2x^2 + 2y^2 - 8 = 0$



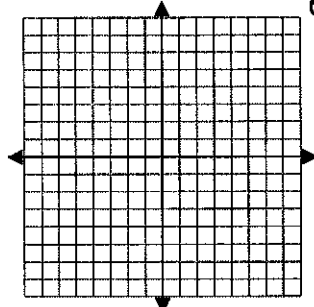
3. $x^2 + y^2 + 4y + 4 = 9$



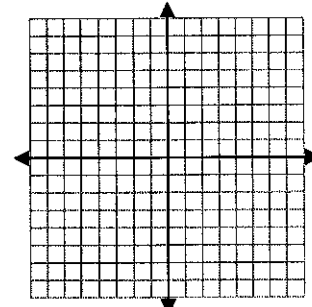
4. $x^2 + 6x + y^2 = 7$



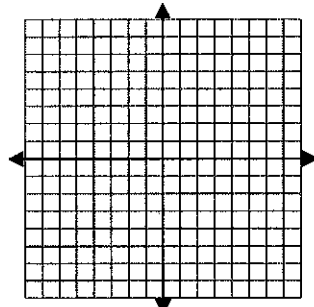
5. $y^2 + x^2 + 4x - 4y - 1 = 0$



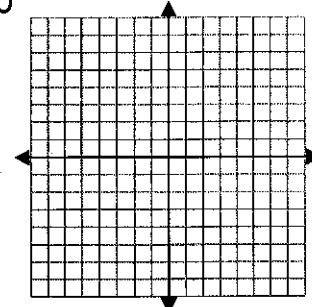
6. $5x^2 + 20x + 5y^2 = 35$



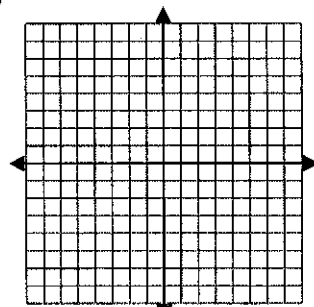
7. $4x^2 + 4y^2 + 32y - 36 = 0$



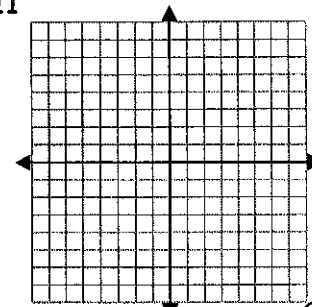
8. $x^2 + y^2 - 3x + 8y = 20$



9. $x^2 - 12x + 84 = -y^2 + 16y$



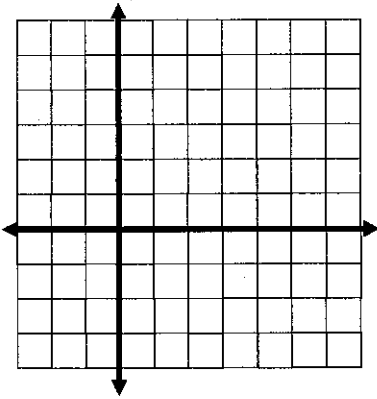
10. $x^2 + y^2 + 2x + 4y = 11$



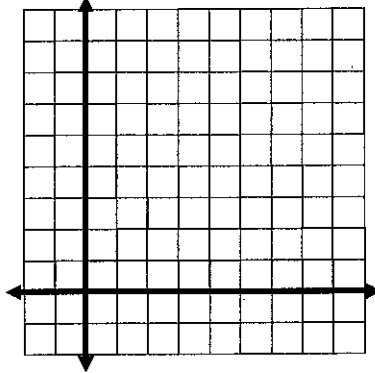
Note: If r^2 is not a perfect square then leave r in simplified radical form but use the decimal equivalent for graphing. Example: $\sqrt{12} = 2\sqrt{3} = 3.46$

1) **Graph the following circle:**

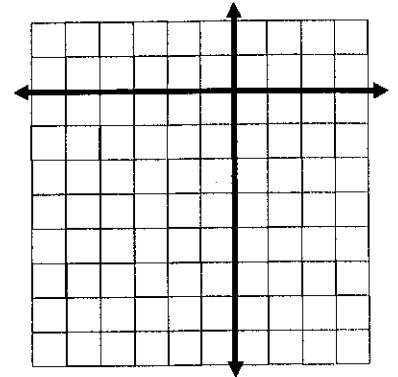
a. $(x - 3)^2 + (y + 1)^2 = 4$



b. $(x - 2)^2 + (y - 5)^2 = 9$



c. $(y + 4)^2 + (x + 2)^2 = 16$



2) **For each circle: Identify its center and radius.**

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

Center: _____

Radius: _____

b. $x^2 + (y - 3)^2 = 18$

Center: _____

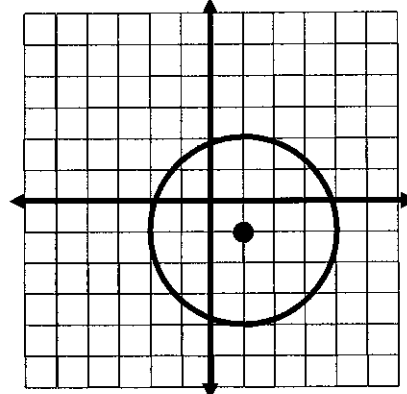
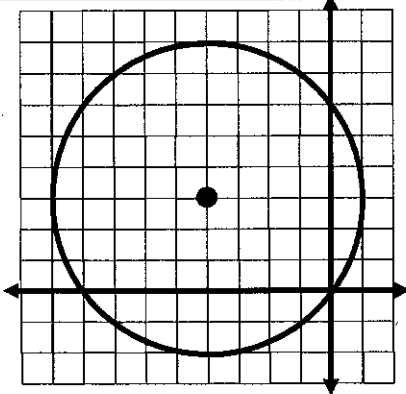
Radius: _____

c. $(y + 8)^2 + (x + 2)^2 = 72$

Center: _____

Radius: _____

3) **Write the equation of the following circles:**



4) Give the equation of the circle that is tangent to the y-axis and center is (-3, 2).

5) **Compare and contrast the following pairs of circles**

a. Circle #1: $(x - 3)^2 + (y + 1)^2 = 25$

Circle #2: $(x + 1)^2 + (y - 2)^2 = 25$

b. Circle #1: $(y + 4)^2 + (x + 7)^2 = 6$

Circle #2: $(x + 7)^2 + (y + 4)^2 = 36$

Putting Equations in Standard Form

Example 1: $x^2 + y^2 + 6x - 8y - 11 = 0$

Example 2: $x^2 + y^2 - 2x + 6y - 10 = 0$

$(x^2 + 6x) + (y^2 - 8y) = 11$

$(x^2 + 6x + 9) + (y^2 - 8y + 16) = 11 + 9 + 16$

$(x + 3)^2 + (y - 4)^2 = 36$

Center: $(-3, 4)$ Radius: 6

Center: _____ Radius: _____

6) Find the standard form, center, and radius of the following circles:

6a) $x^2 + y^2 - 4x + 8y - 5 = 0$

6b) $4x^2 + 4y^2 + 36y + 5 = 0$

Center: _____

Center: _____

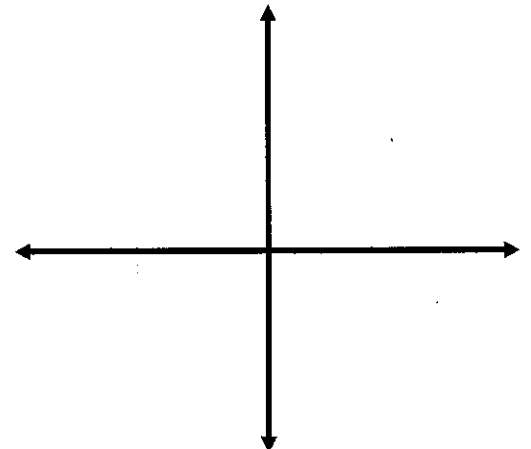
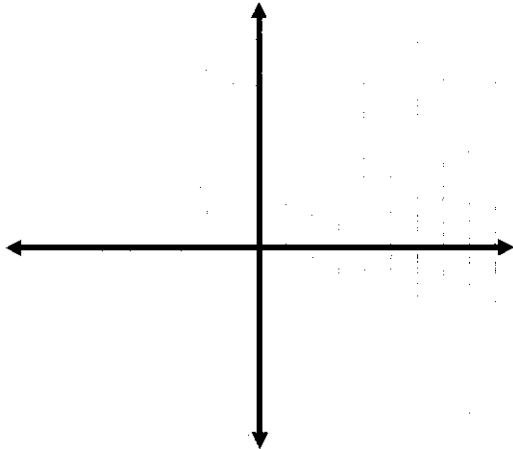
Radius: _____

Radius: _____

7) Graph the following circles:

7a) $x^2 - 2x + y^2 + 8y - 8 = 0$

7b) $x^2 + y^2 - 6x + 4y - 3 = 0$



8) Give the equation of the circle whose center is $(5, -3)$ and goes through $(2, 5)$

9) Give the equation whose endpoints of a diameter at $(-4, 1)$ and $(4, -5)$

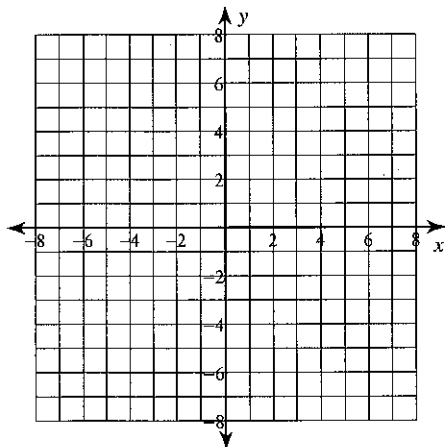
10) Give the equation of the circle whose center is $(4, -3)$ and goes through $(1, 5)$

11) Give the equation whose endpoints of a diameter at $(-3, 2)$ and $(1, -5)$

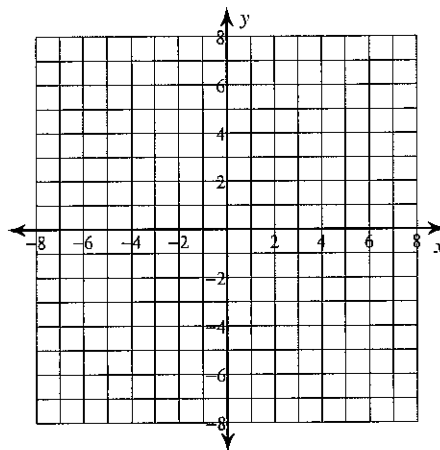
Equations of Circles

Identify the center and radius of each. Then sketch the graph.

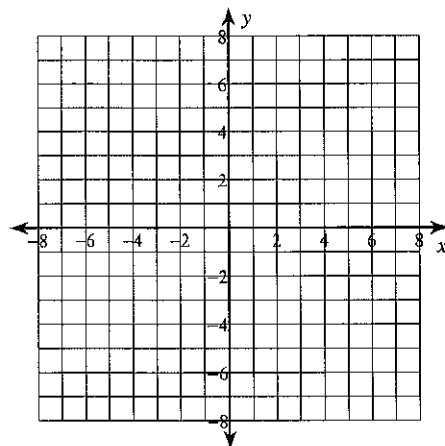
1) $(x - 1)^2 + (y + 3)^2 = 4$



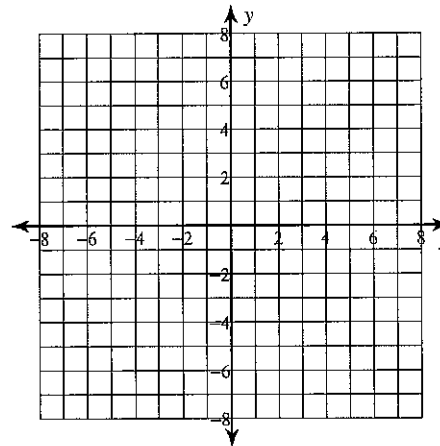
2) $(x - 2)^2 + (y + 1)^2 = 16$



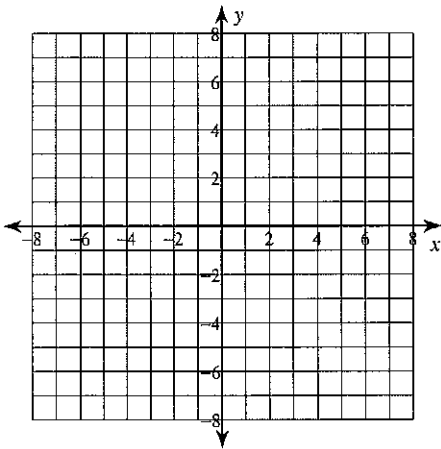
3) $(x - 1)^2 + (y + 4)^2 = 9$



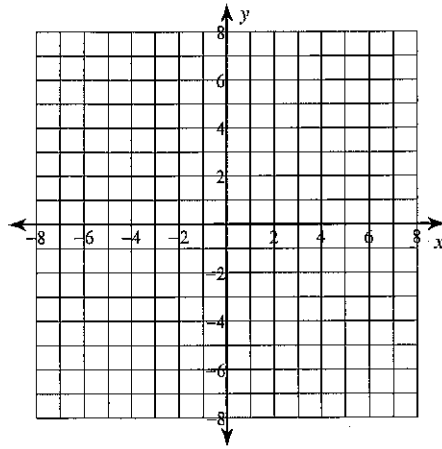
4) $x^2 + (y - 3)^2 = 14$



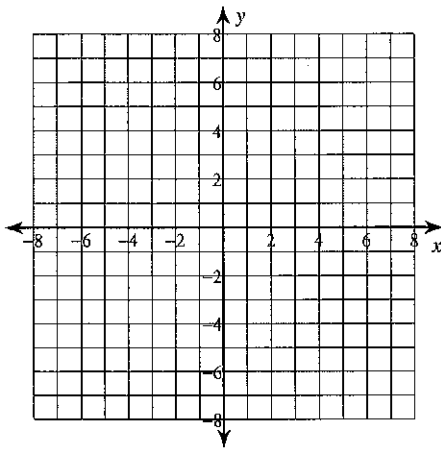
5) $y^2 + 4x - 20 - 2y = -x^2$



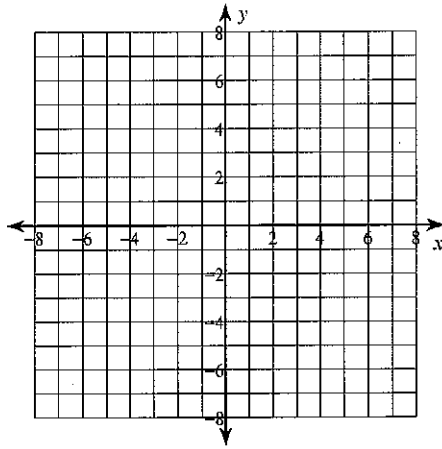
6) $-9 = -y^2 - x^2$



7) $9 = 2y - y^2 - 6x - x^2$



8) $16 + x^2 + y^2 - 8x - 6y = 0$



Use the information provided to write the equation of each circle.

9) Center: $(13, -13)$
Radius: 4

10) Center: $(-13, -16)$
Point on Circle: $(-10, -16)$

11) Ends of a diameter: $(18, -13)$ and $(4, -3)$

12) Center: $(10, -14)$
Tangent to $x = 13$

13) Center lies in the first quadrant
Tangent to $x = 8$, $y = 3$, and $x = 14$

14) Center: $(0, 13)$
Area: 25π

Graphing and Properties of Circles

Identify the center and radius of each.

1) $x^2 + y^2 = 49$

2) $x^2 + y^2 = 324$

3) $(x+2)^2 + (y-3)^2 = 183$

4) $(x+7)^2 + (y+8)^2 = 64$

5) $(x+10)^2 + (y+9)^2 = 36$

6) $(x+5)^2 + (y-10)^2 = 9$

7) $x^2 + (y+2)^2 = 121$

8) $(x-14)^2 + (y-2)^2 = 4$

9) $364 + 28y + y^2 + x^2 = -26x$

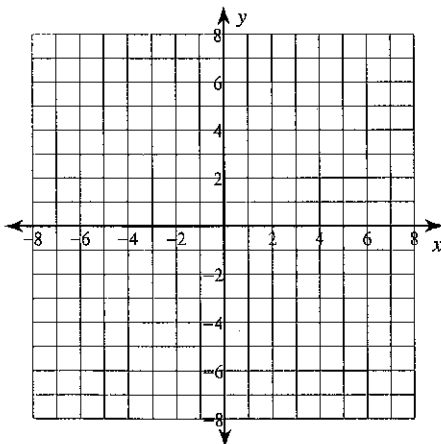
10) $x^2 + y^2 + 24x + 10y + 160 = 0$

11) $-6x = -x^2 + 32y - 264 - y^2$

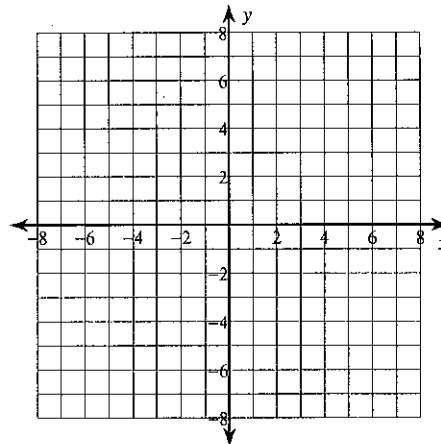
12) $-6x + x^2 = 97 + 10y - y^2$

Identify the center and radius of each. Then sketch the graph.

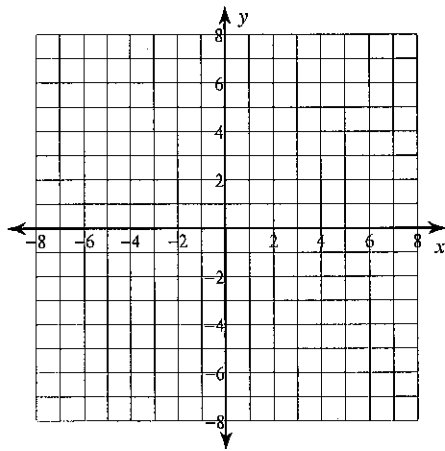
13) $(x+1)^2 + (y-2)^2 = 9$



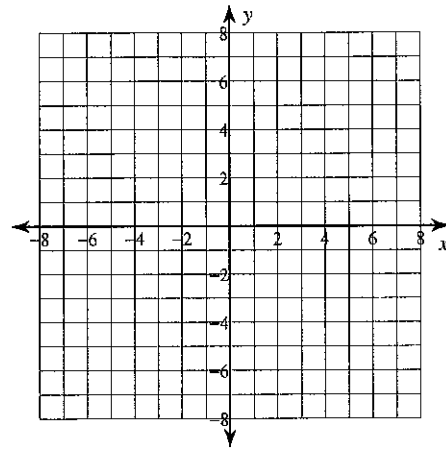
14) $(x+2)^2 + (y+3)^2 = 4$



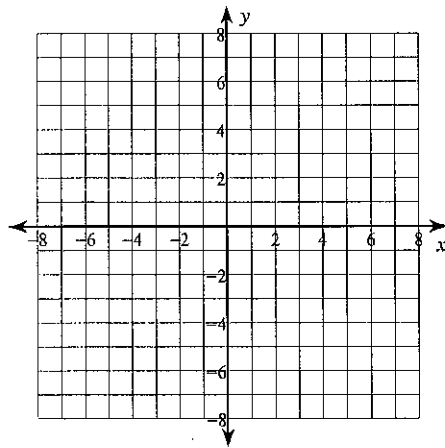
$$15) (x+1)^2 + (y+2)^2 = 25$$



$$16) (x+3)^2 + (y-3)^2 = 8$$



$$17) (x+3)^2 + (y+2)^2 = 9$$



$$18) \left(x + \frac{5}{2}\right)^2 + (y - \sqrt{14})^2 = 9$$

