Algebra II
Lesson #1 Unit 7
Class Worksheet #1
For Worksheet #1

Introduction to the Distance Formula

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Given any two points on the x-y plane, we want to find the distance between them.

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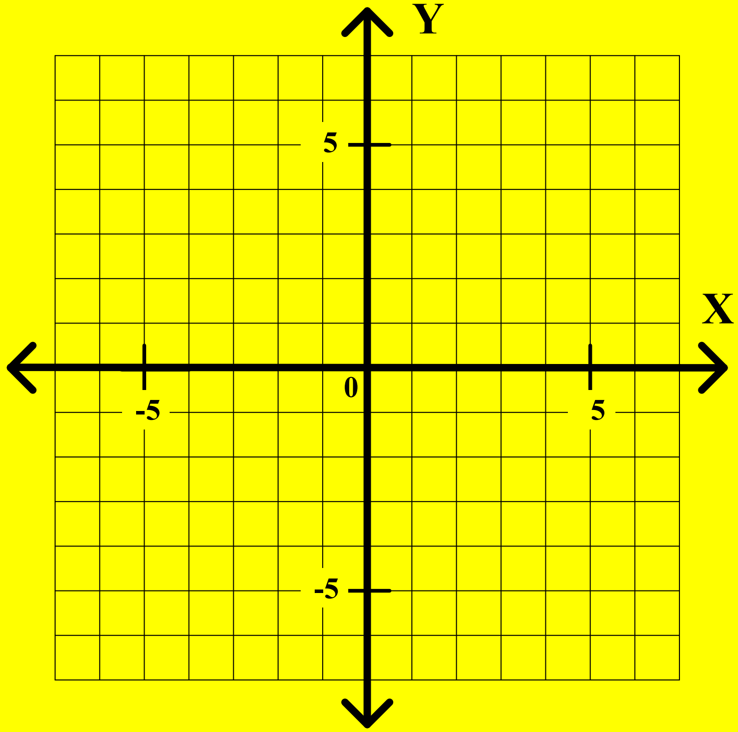

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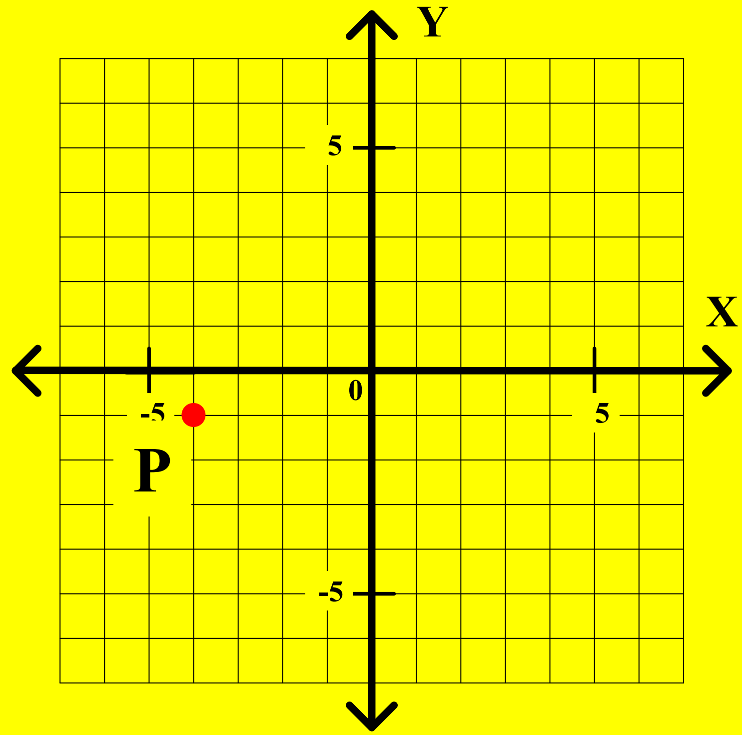

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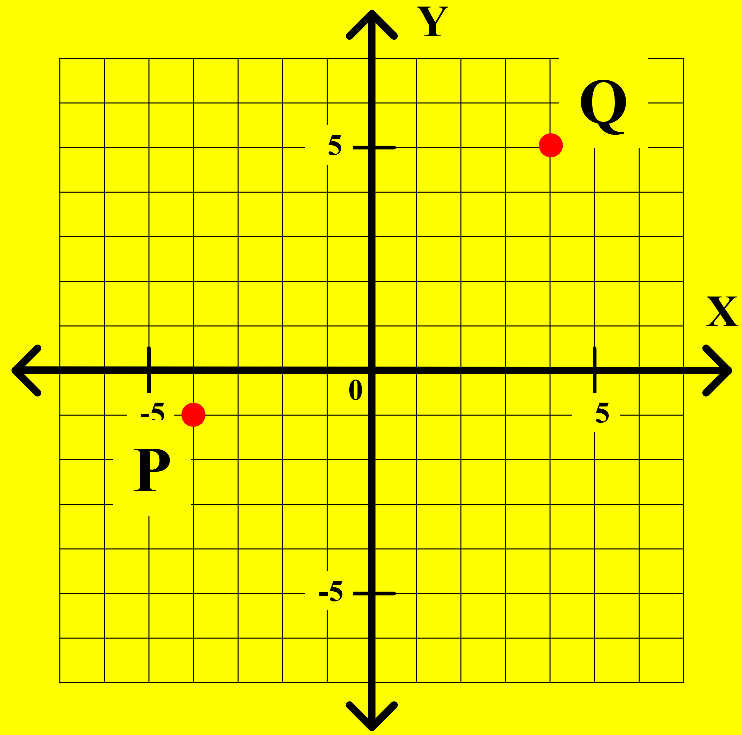

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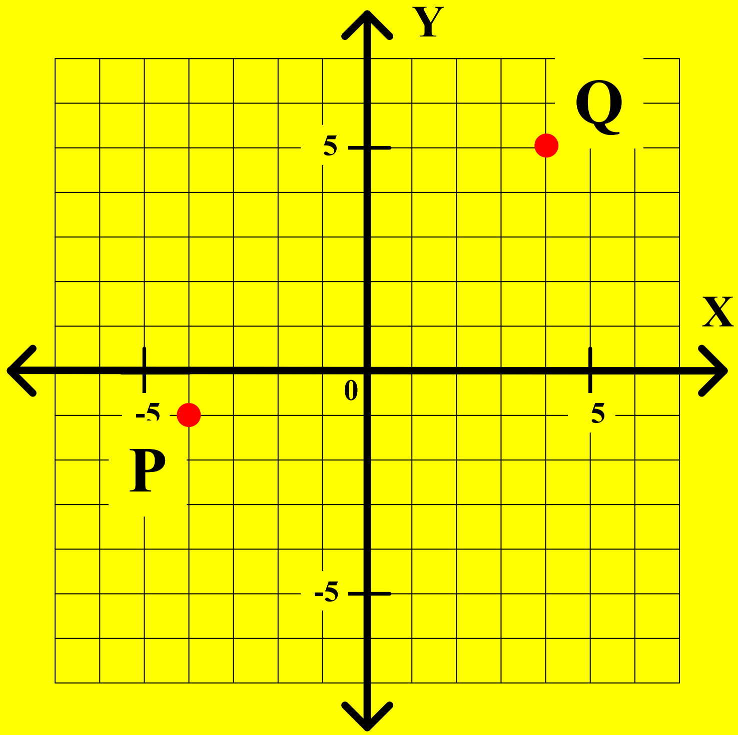
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

We will start by graphing points P and Q. Now we can draw line segment PQ.



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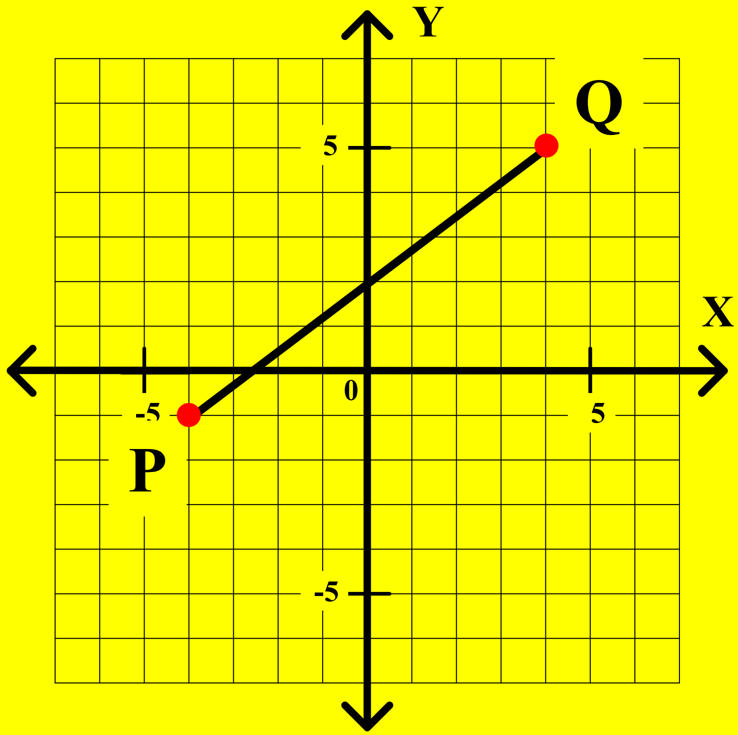

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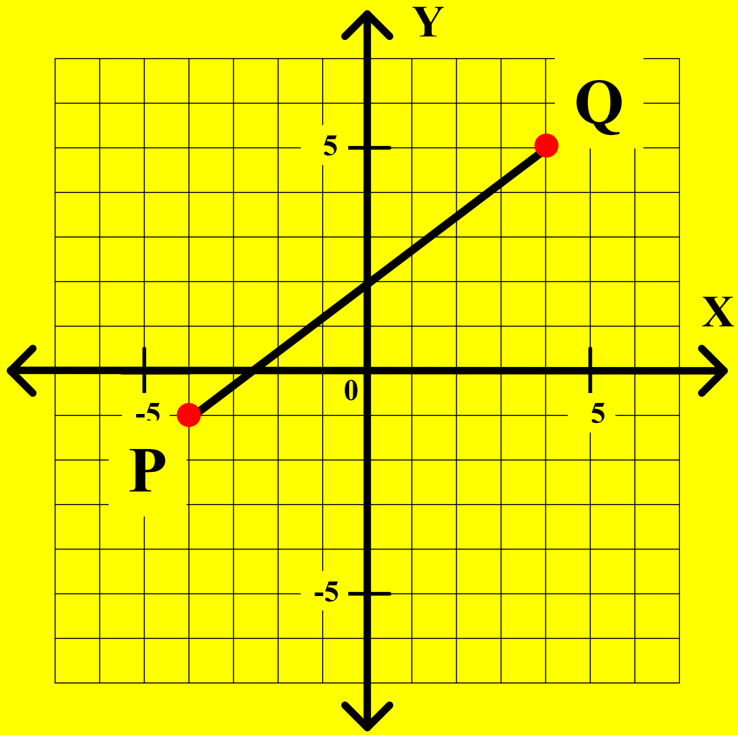

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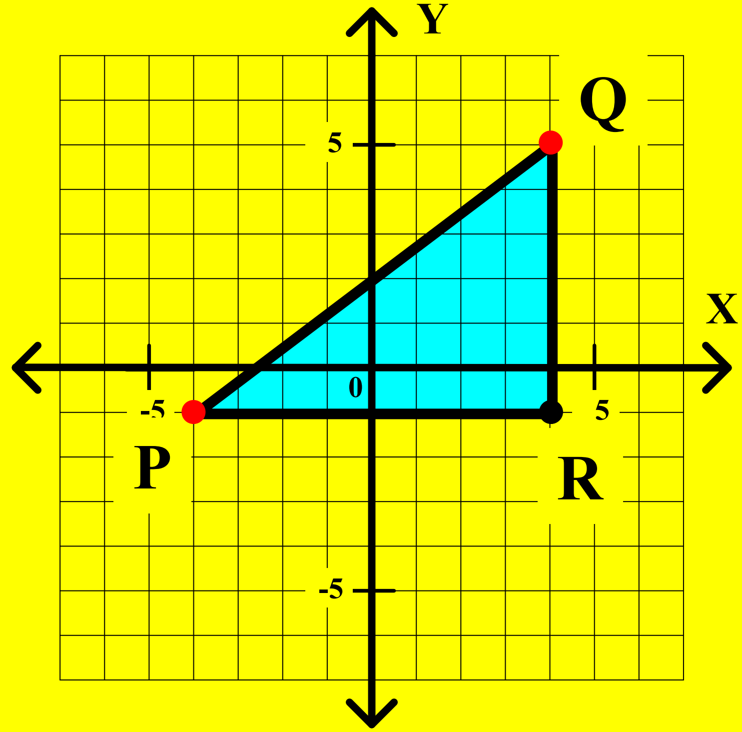
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

We will start by graphing points P and Q. Now we can draw line segment PQ. We need to find the length of $\overline{PQ}$. Consider right triangle PQR.



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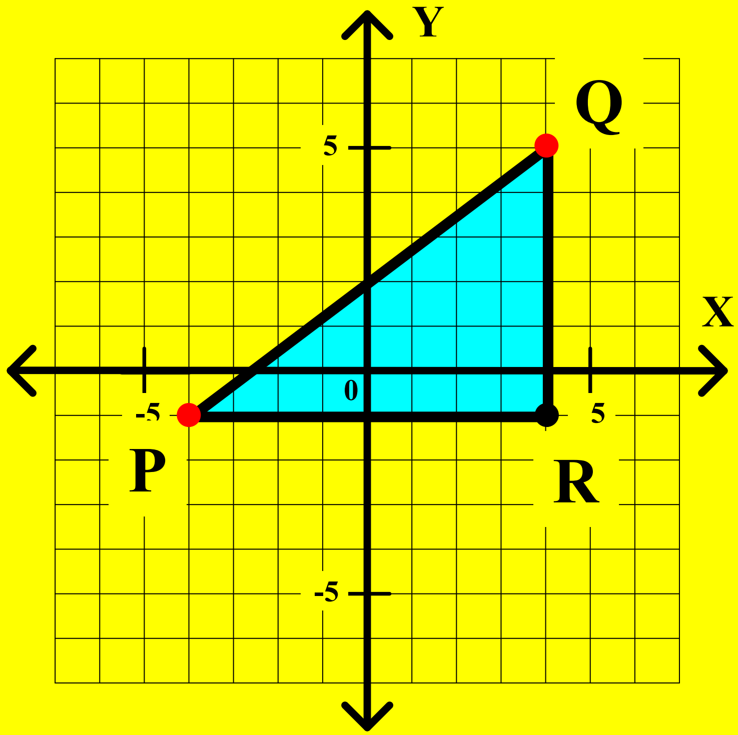

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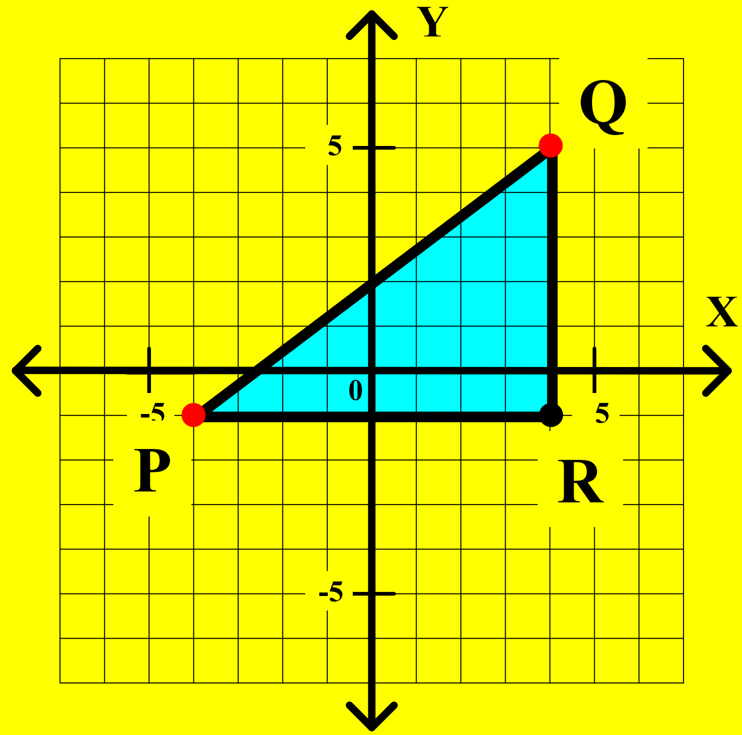
The length of segment PR



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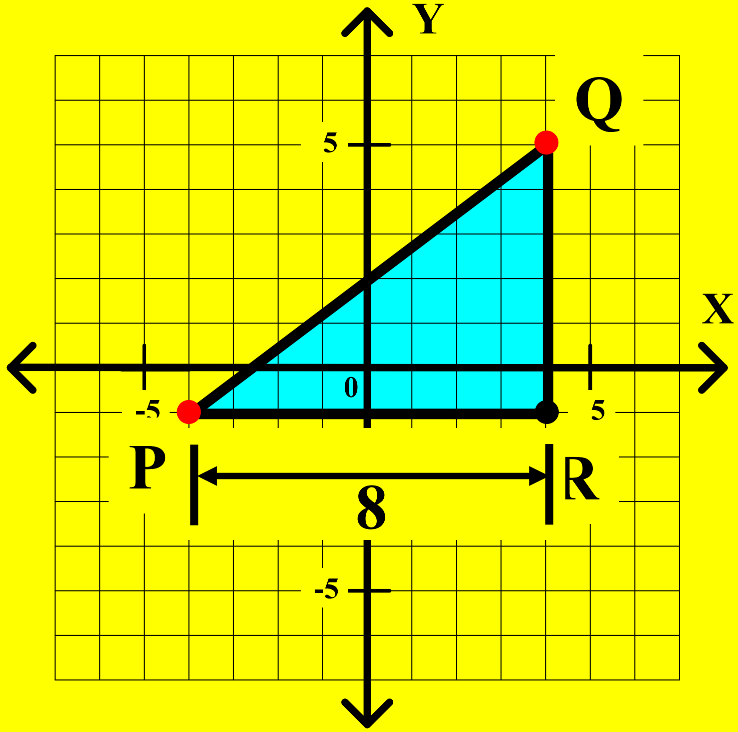
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

The length of segment PR (8 units)



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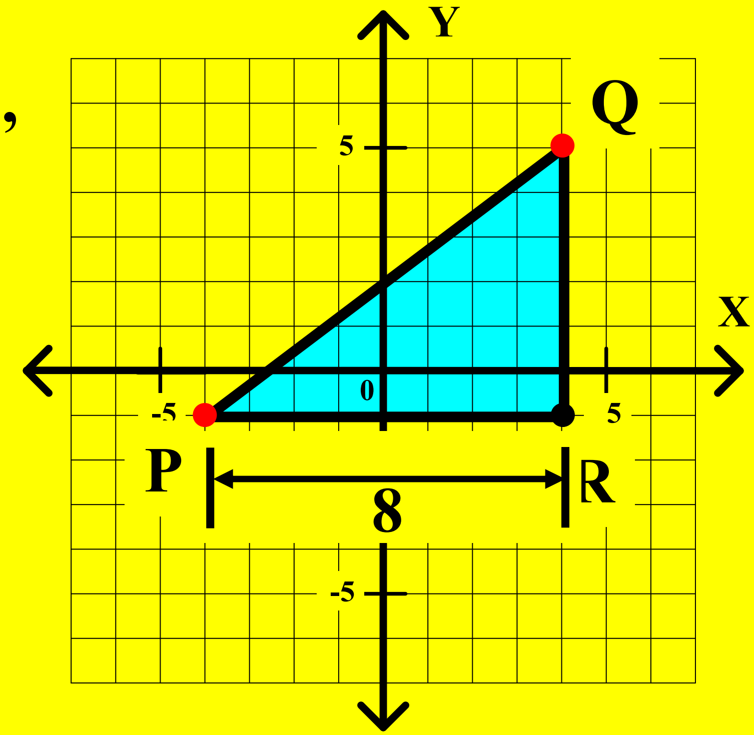
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

The length of segment PR (8 units), the horizontal leg,



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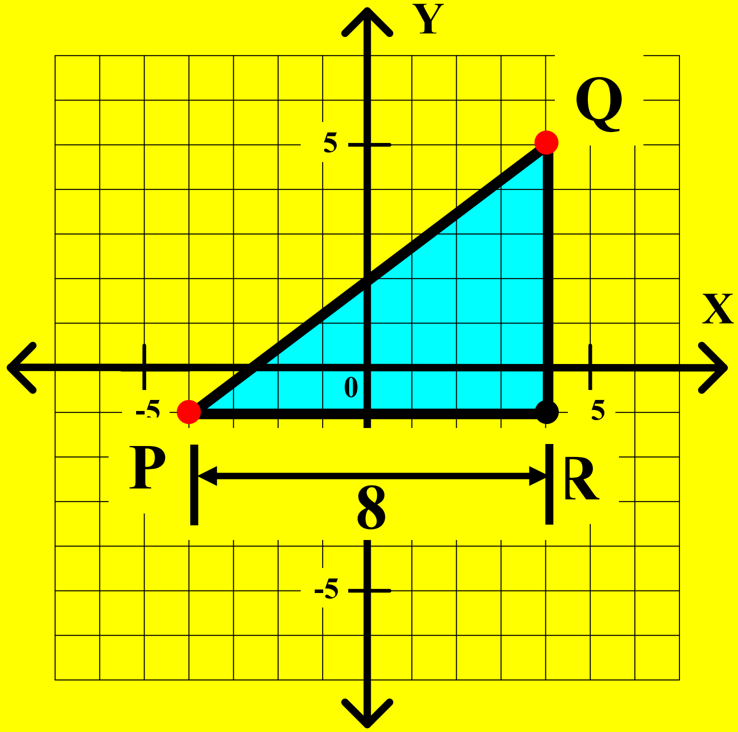
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

The length of segment PR (8 units), the horizontal leg, is the absolute value of the difference between the x-coordinates of points P and Q.



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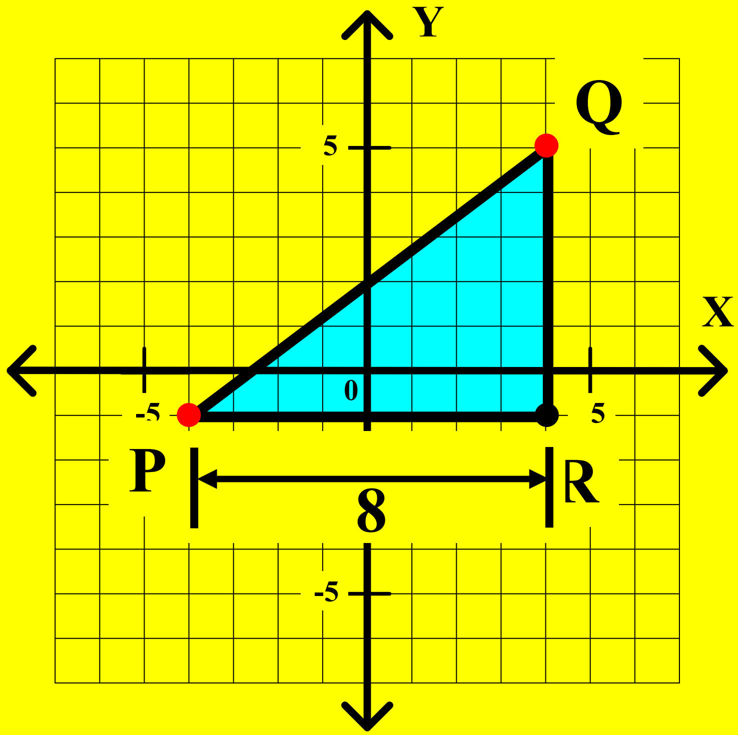

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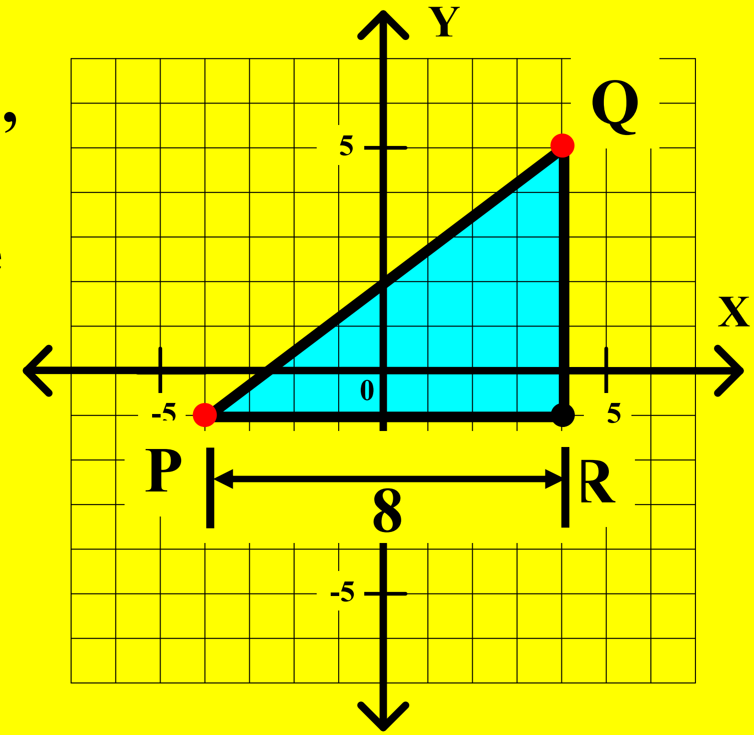

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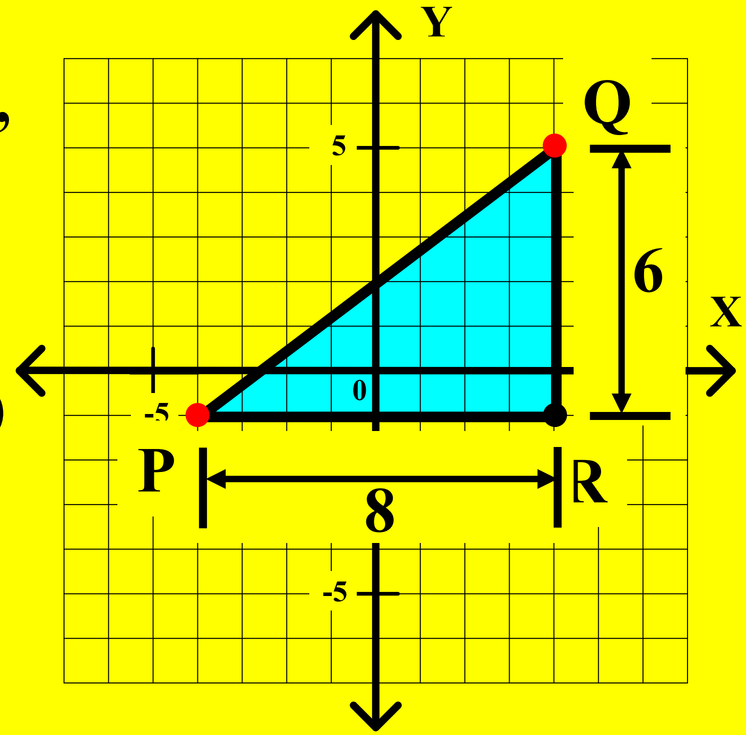

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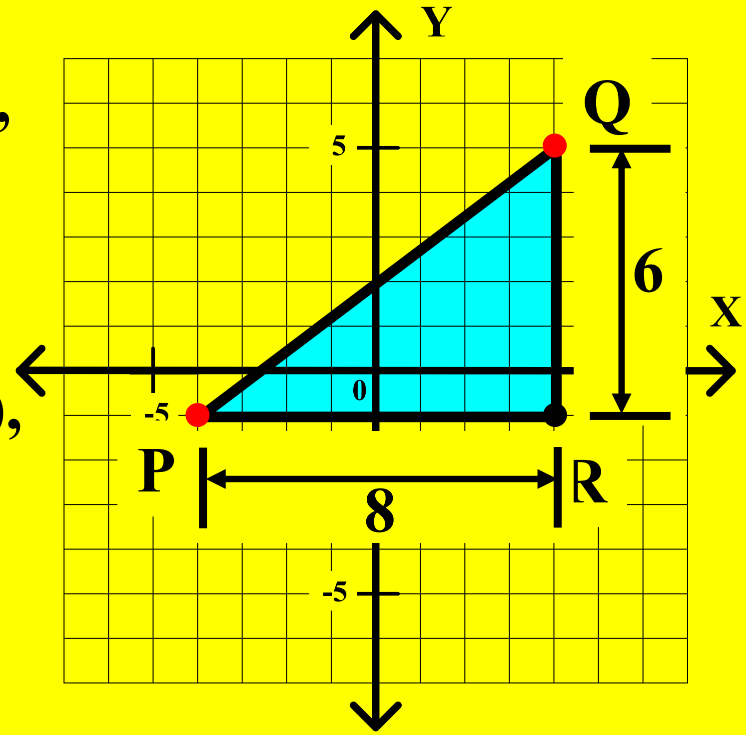

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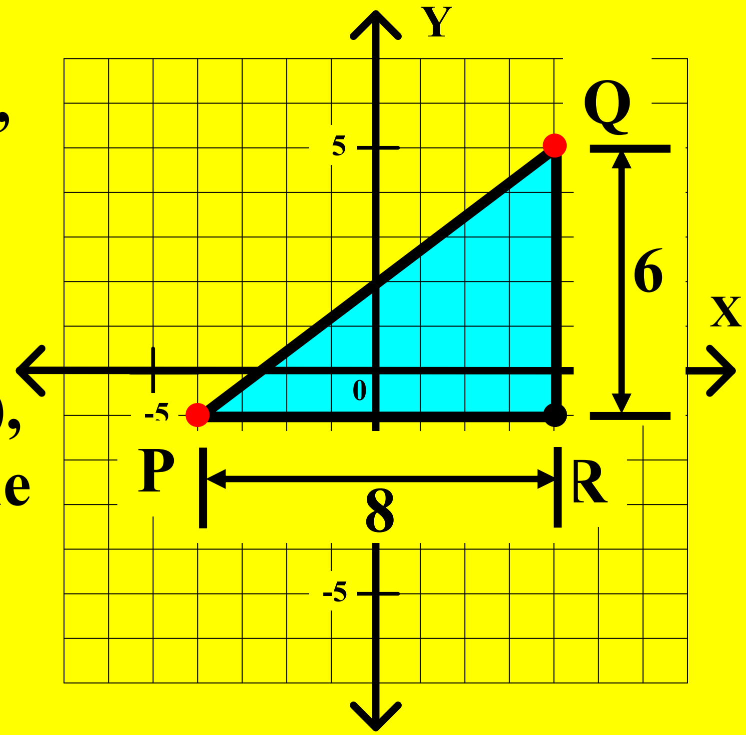

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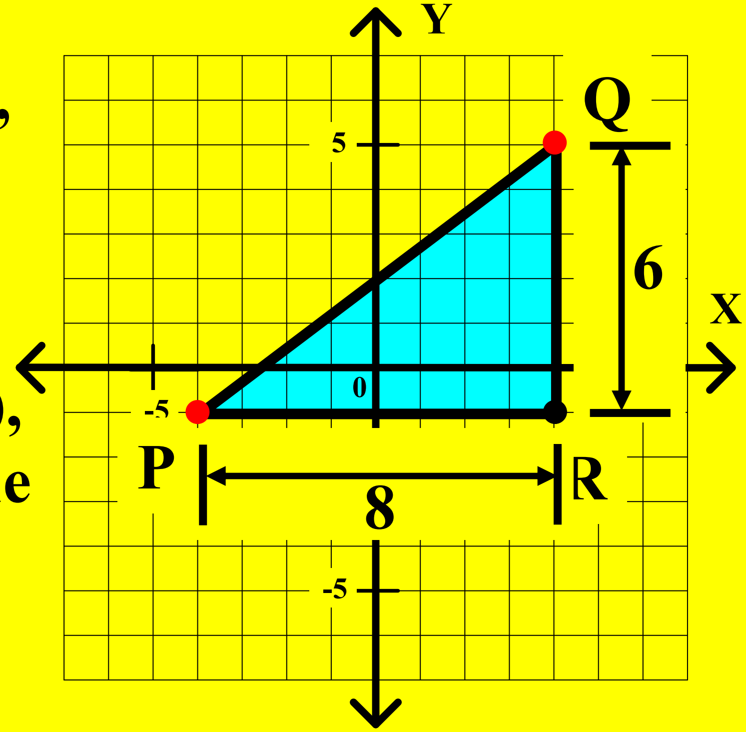

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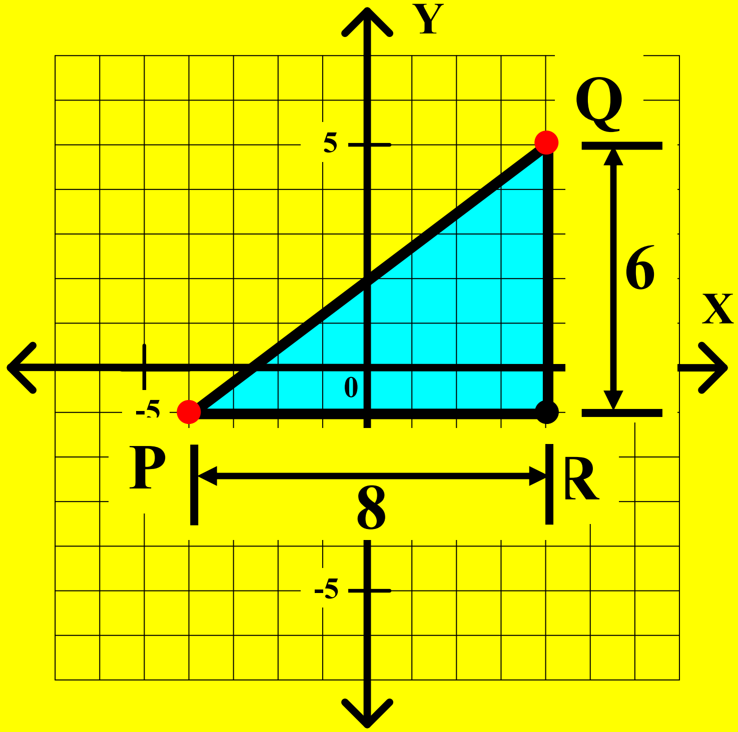

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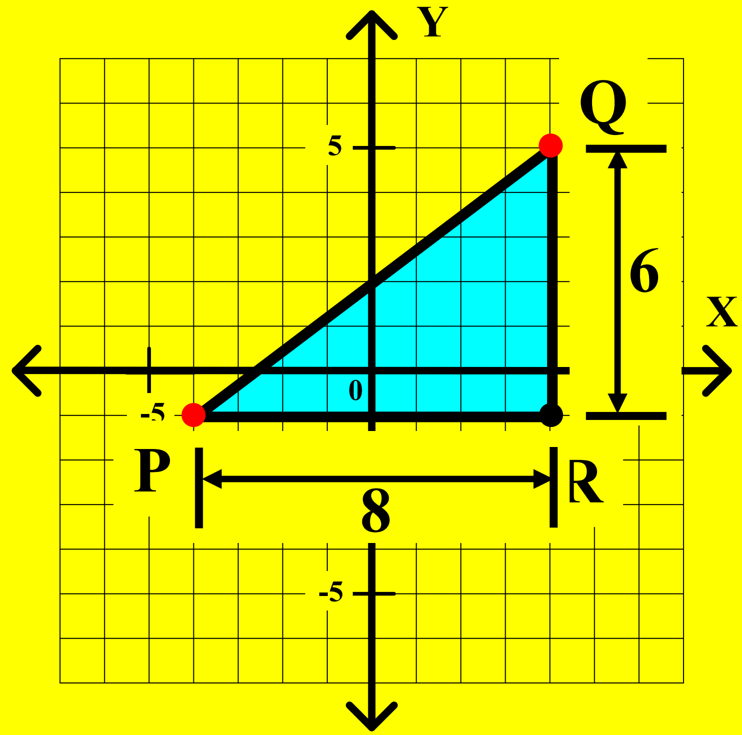
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

Now, the Pythagorean Theorem can be used to calculate PQ.



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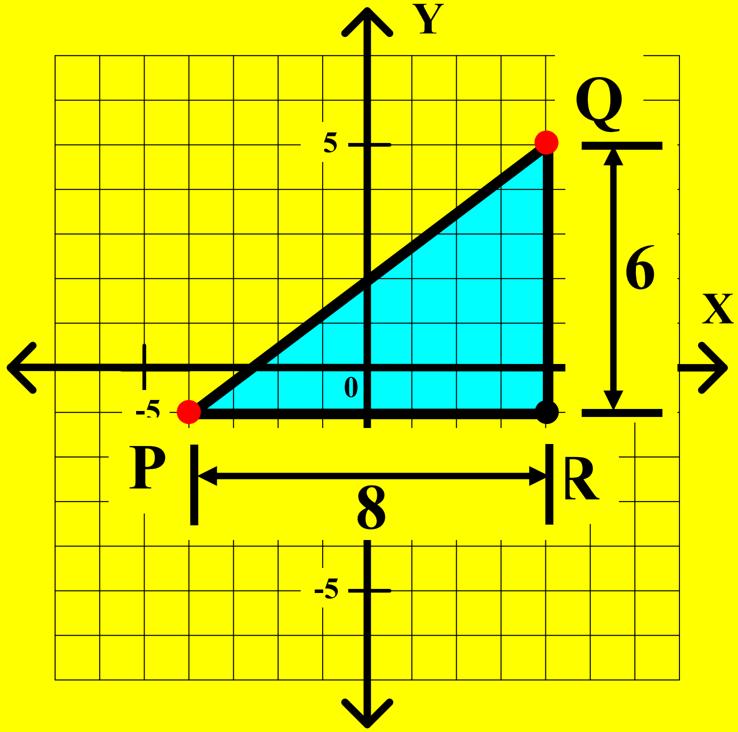

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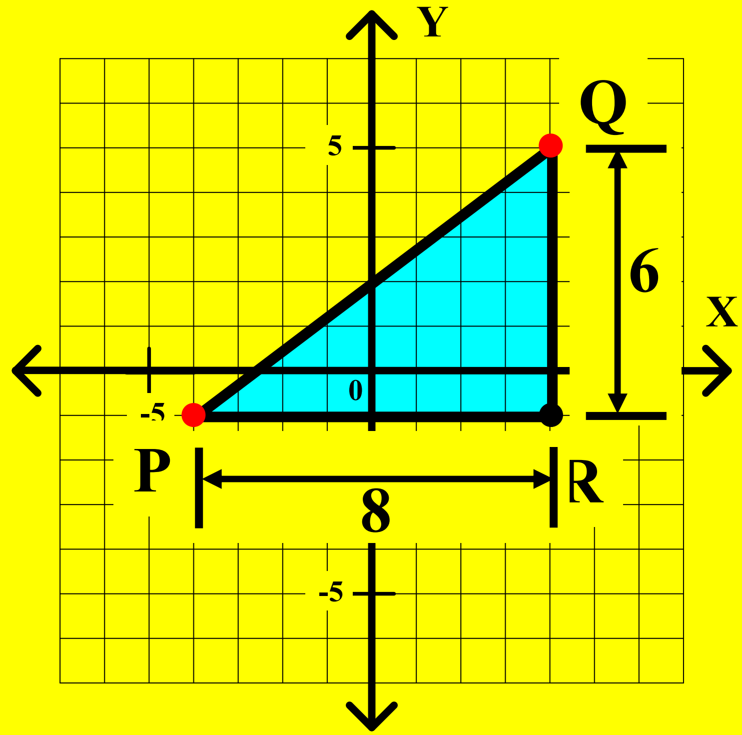
$$PQ = \sqrt{8^2 + 6^2}$$



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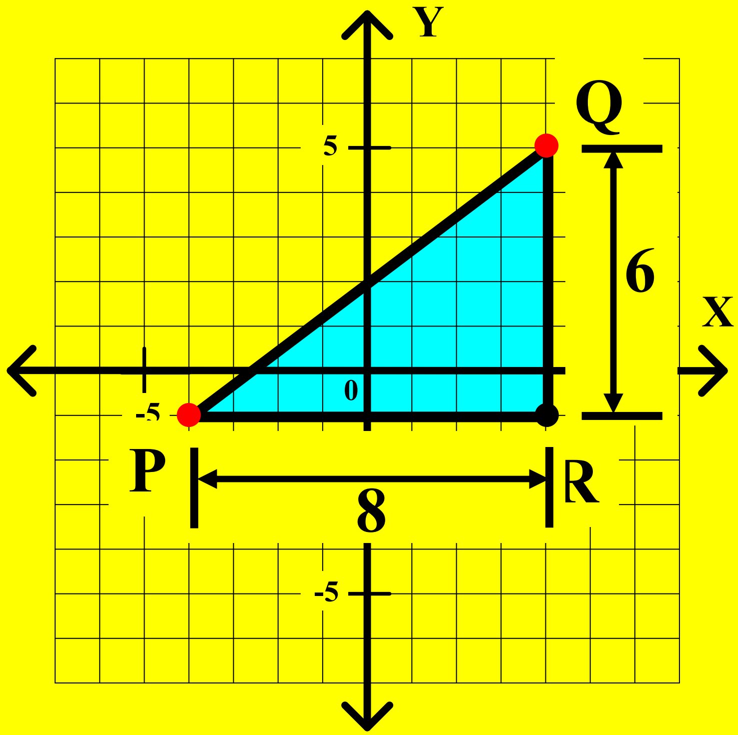

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$$PQ = \sqrt{8^2 + 6^2} = \sqrt{100}$$

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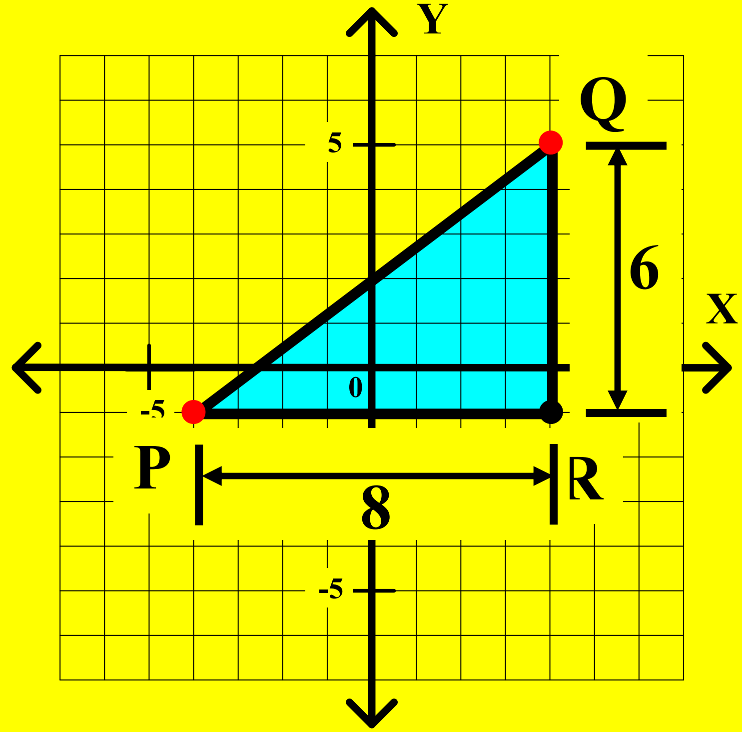
$PQ = \sqrt{8^2 + 6^2} = \sqrt{100} = 10$



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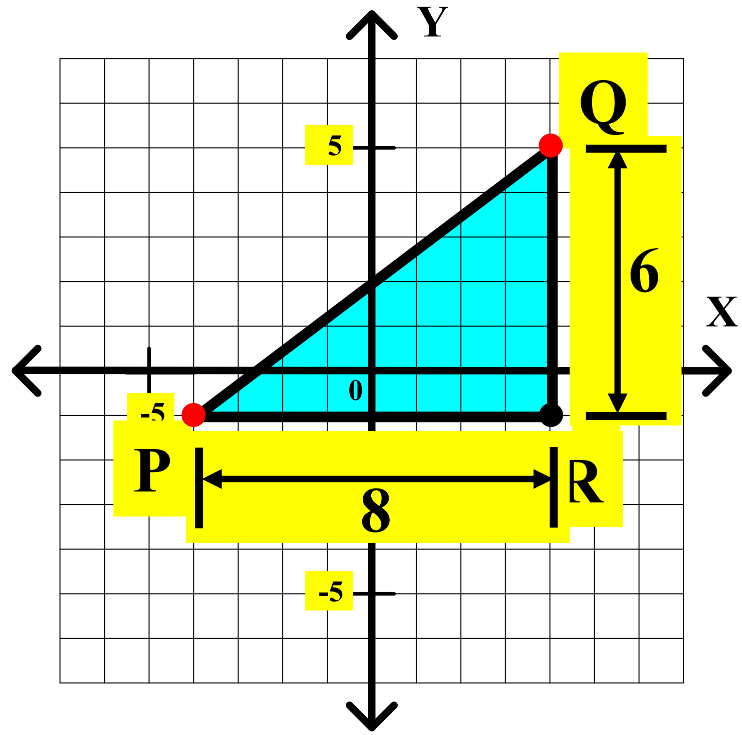

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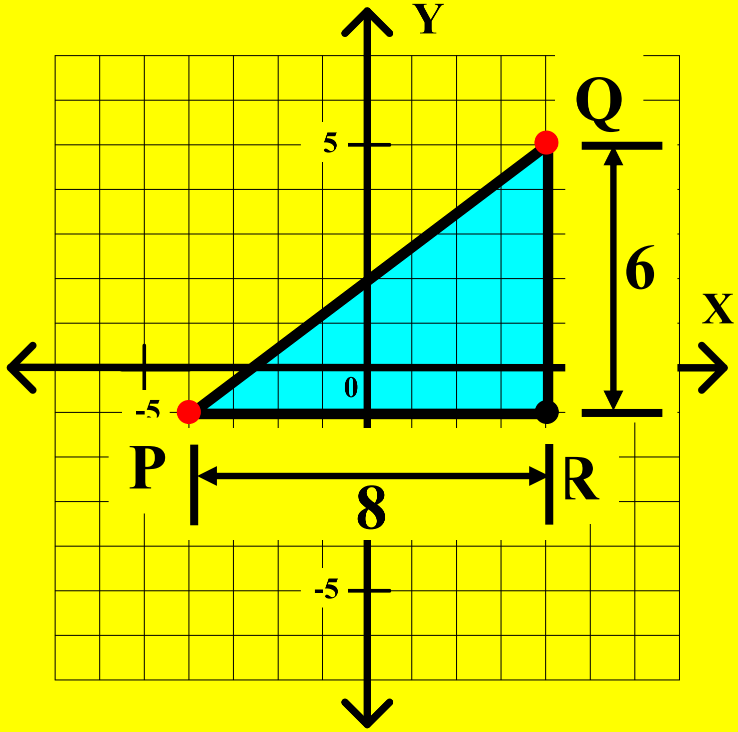

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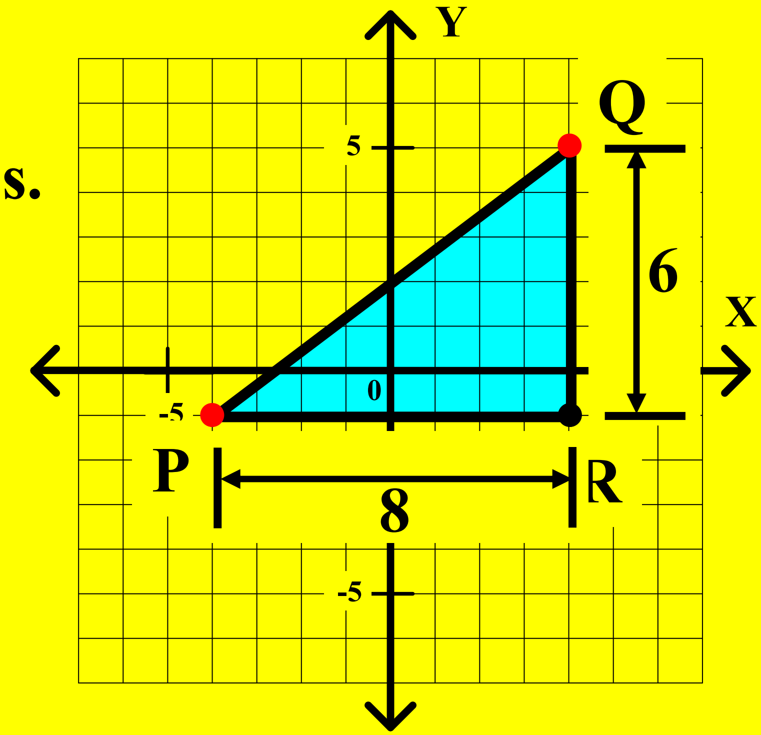
Now, we can generalize this process.



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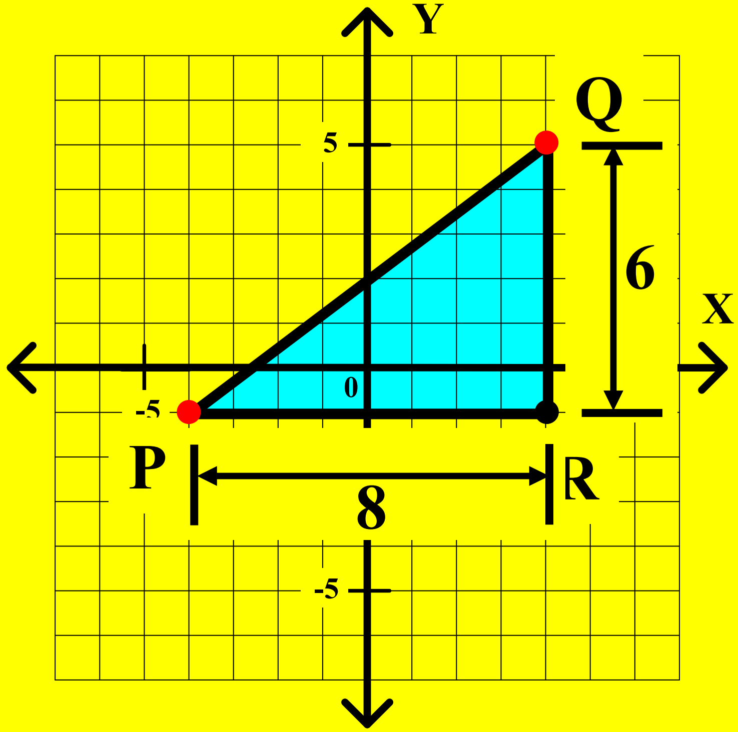

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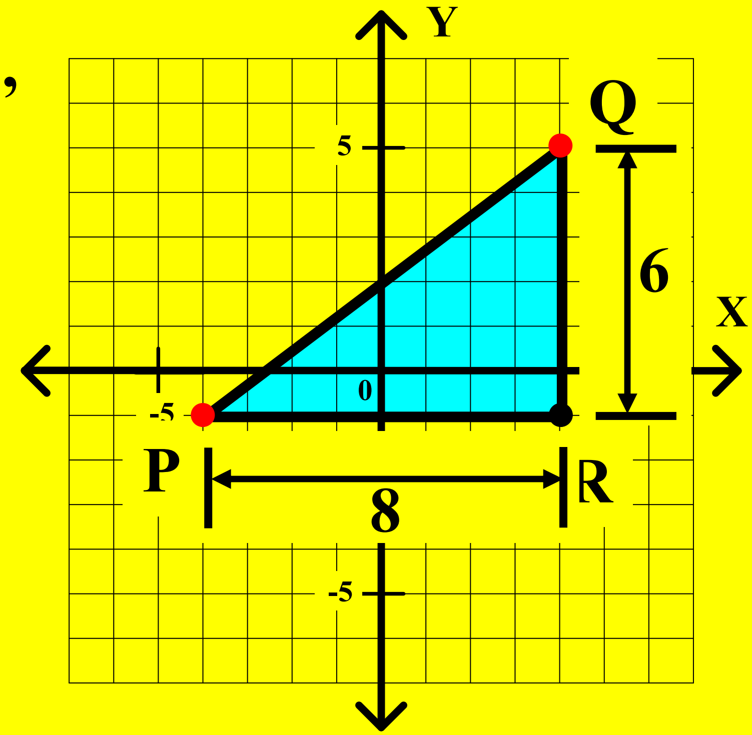

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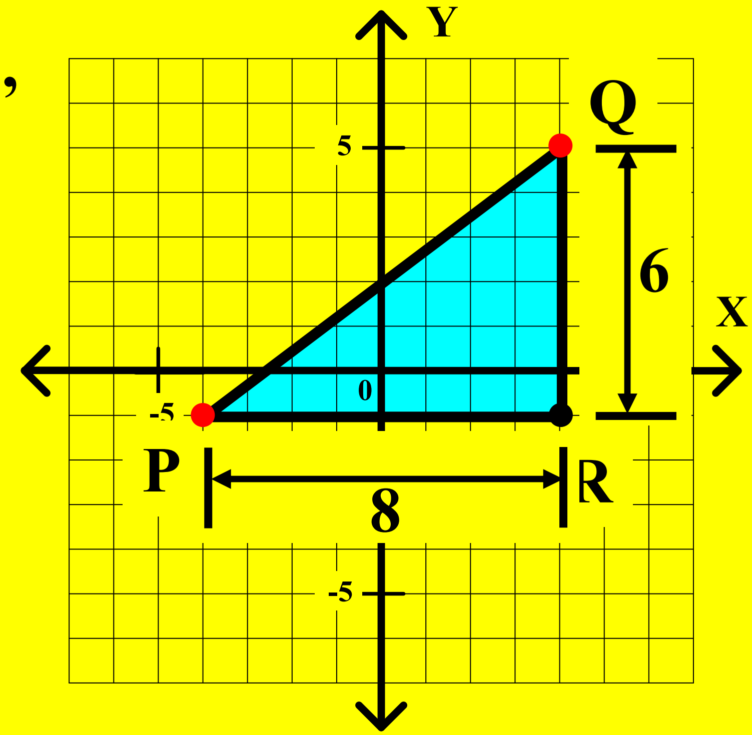

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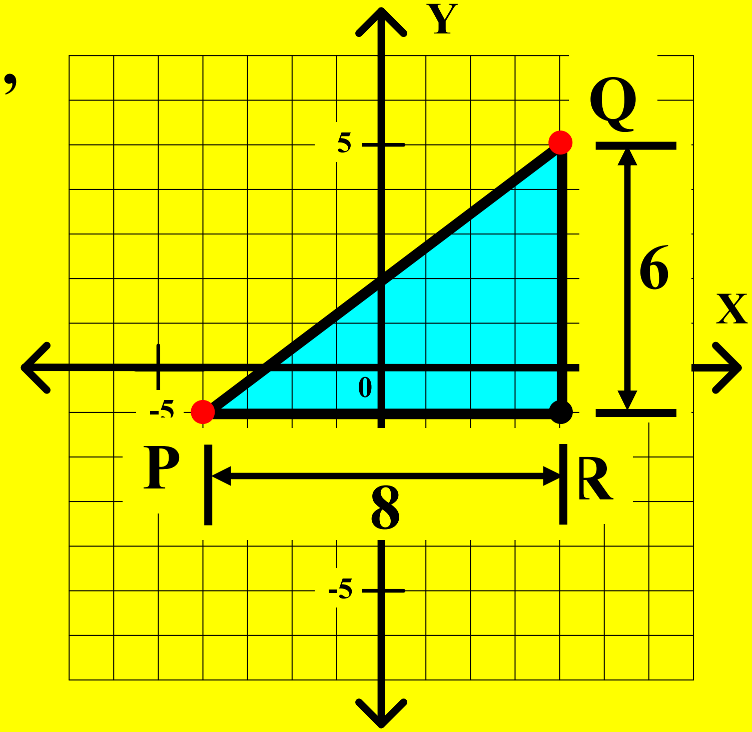
$$PR = |x_1 - x_2| \text{ and } QR = |y_1 - y_2|$$



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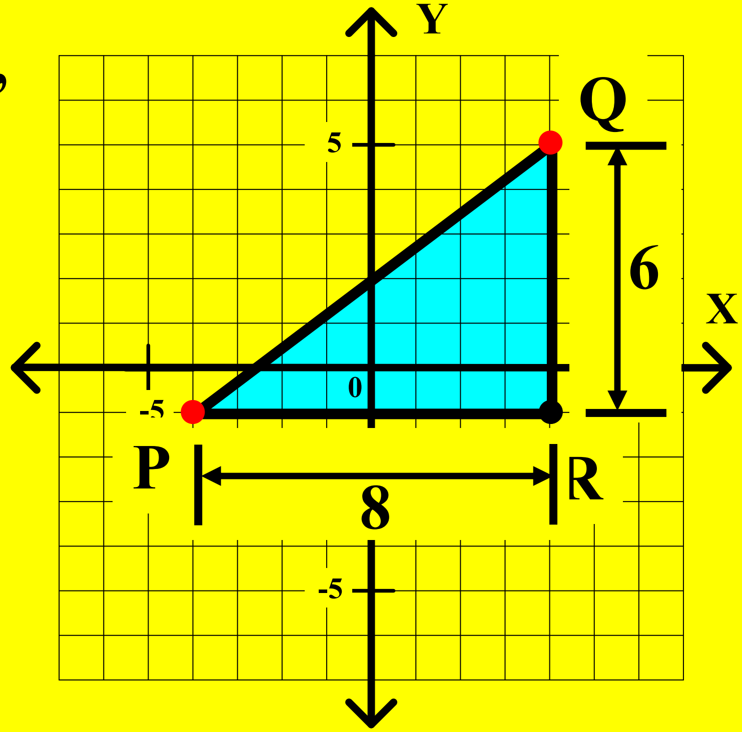

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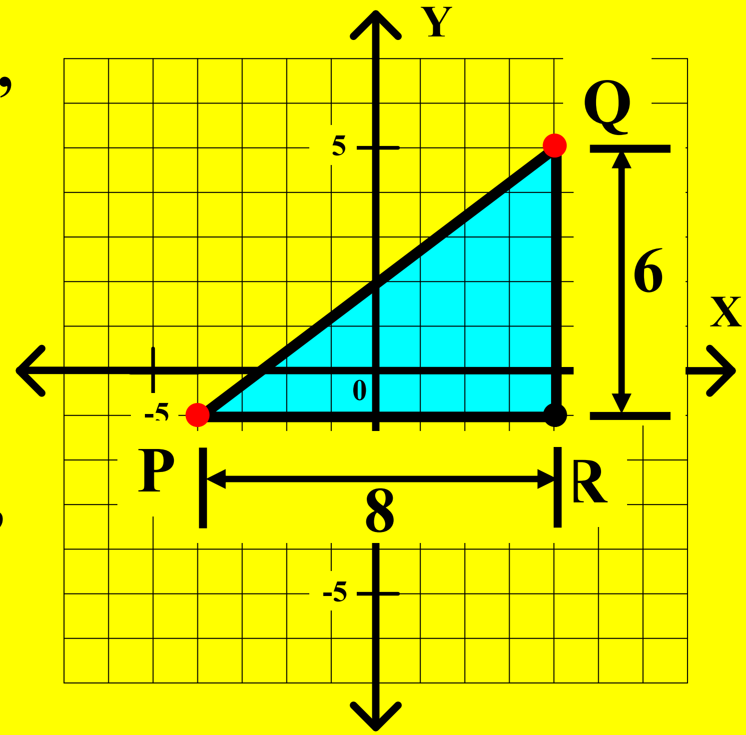

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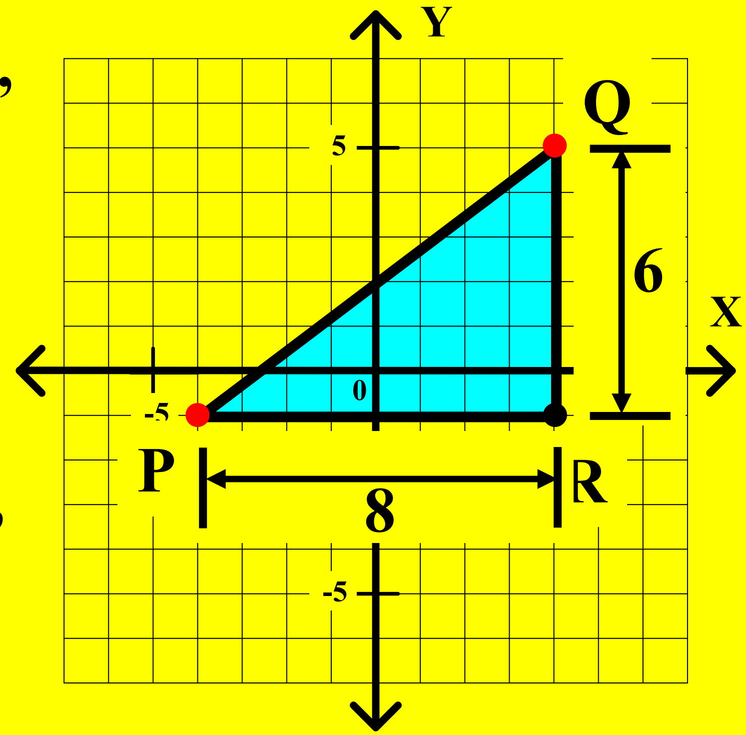

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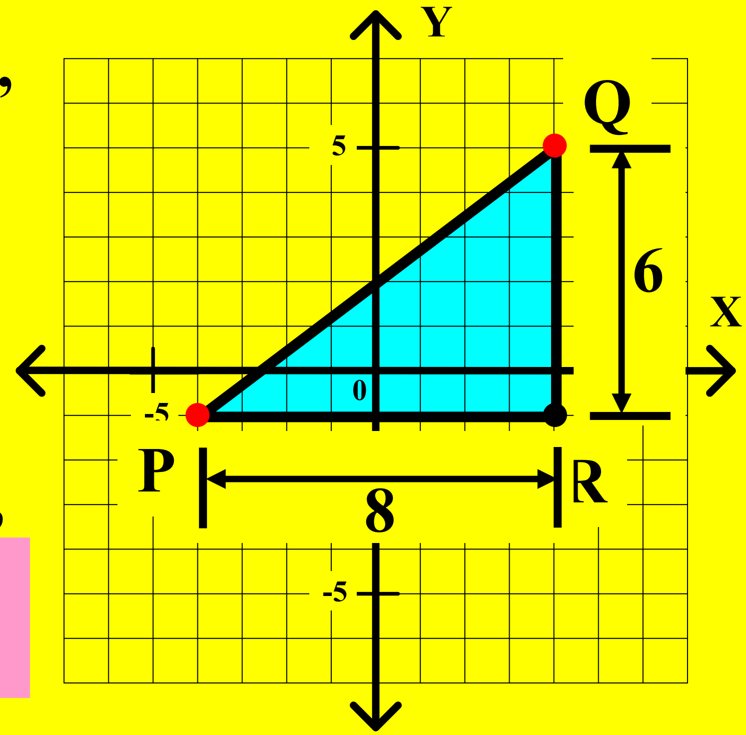

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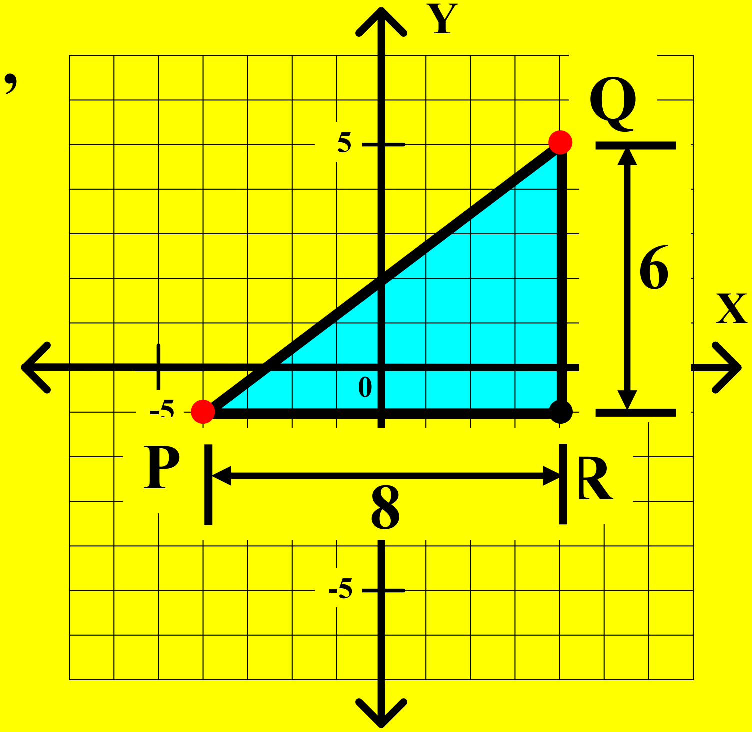

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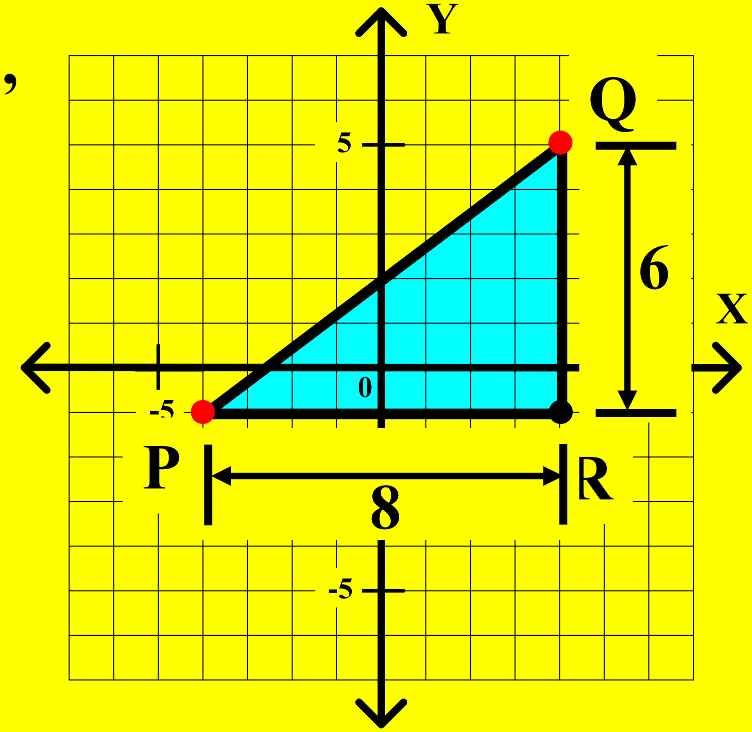

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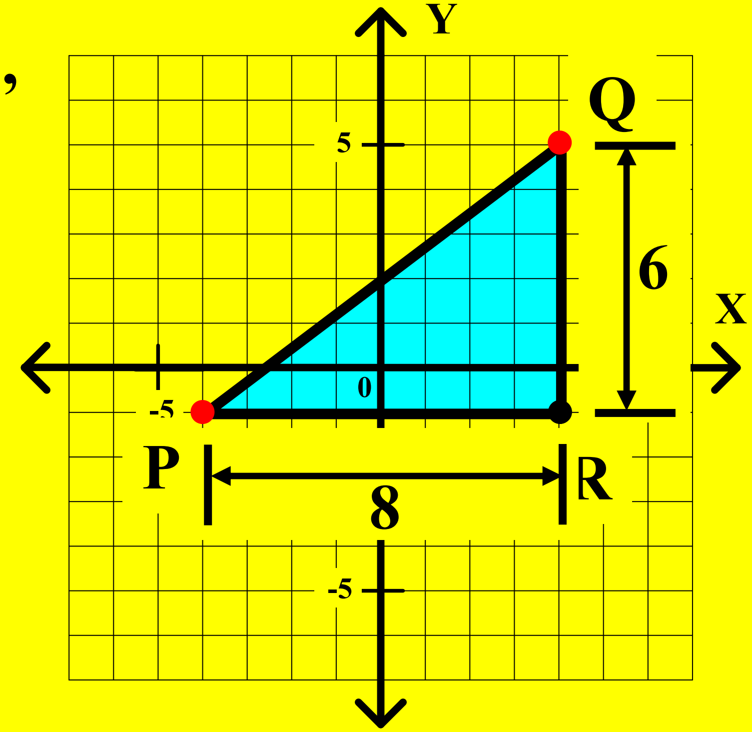

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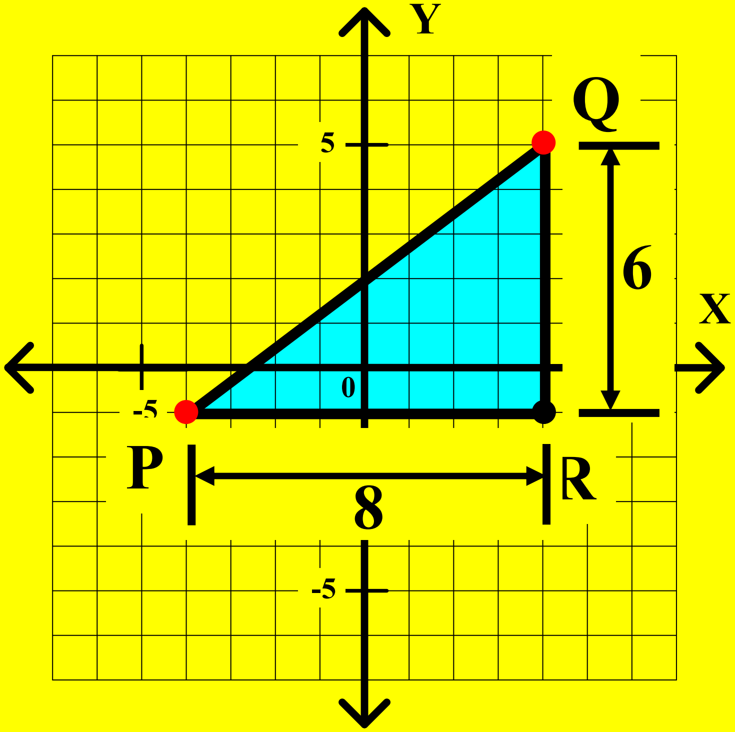

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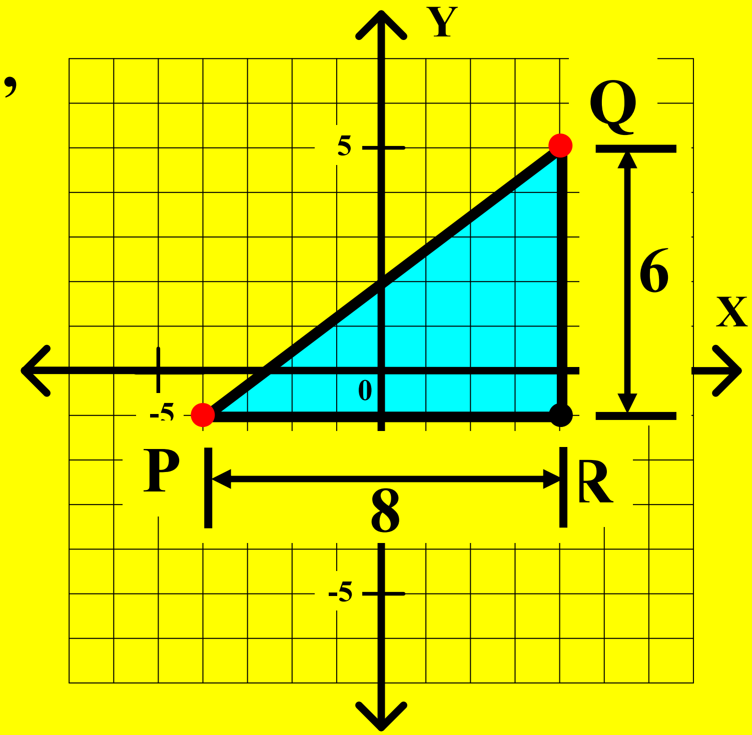

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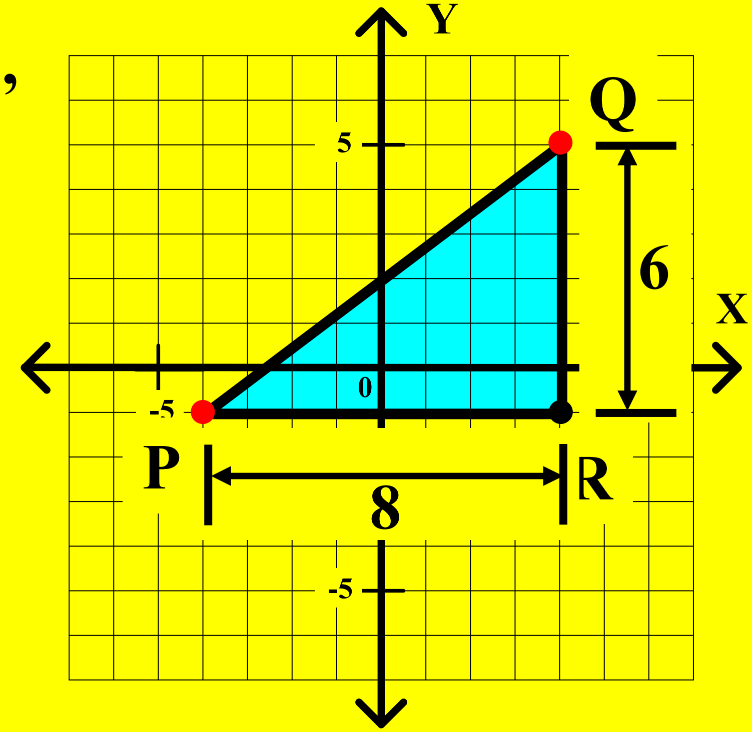

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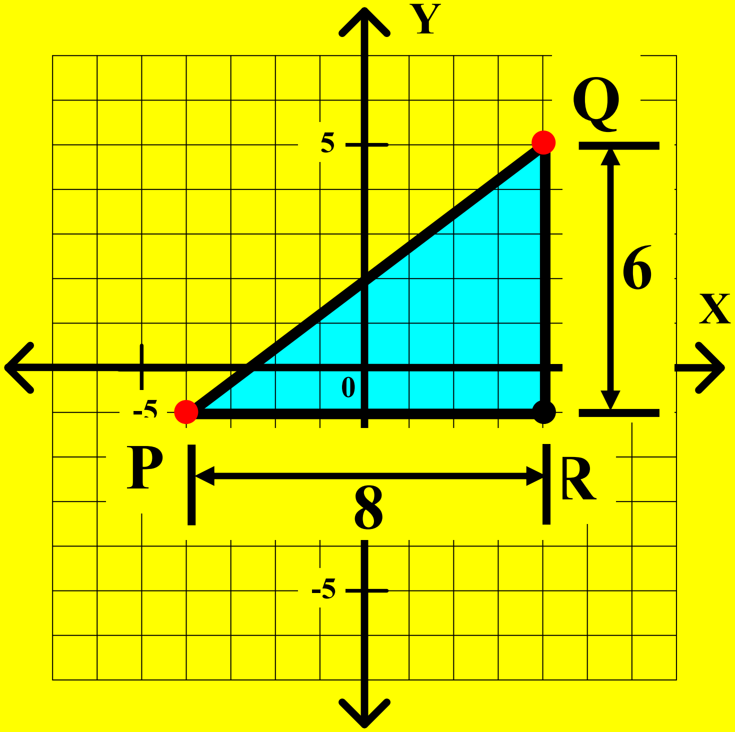

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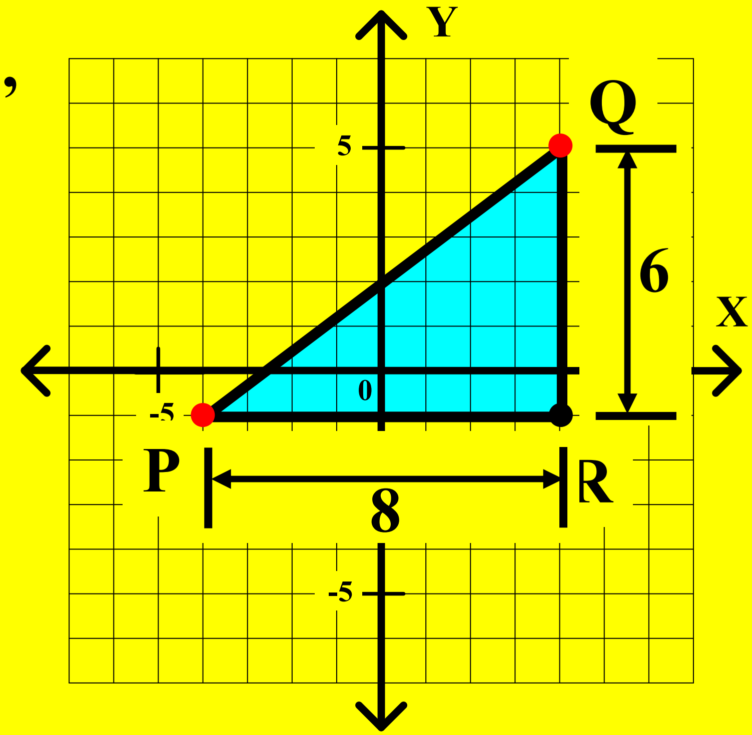

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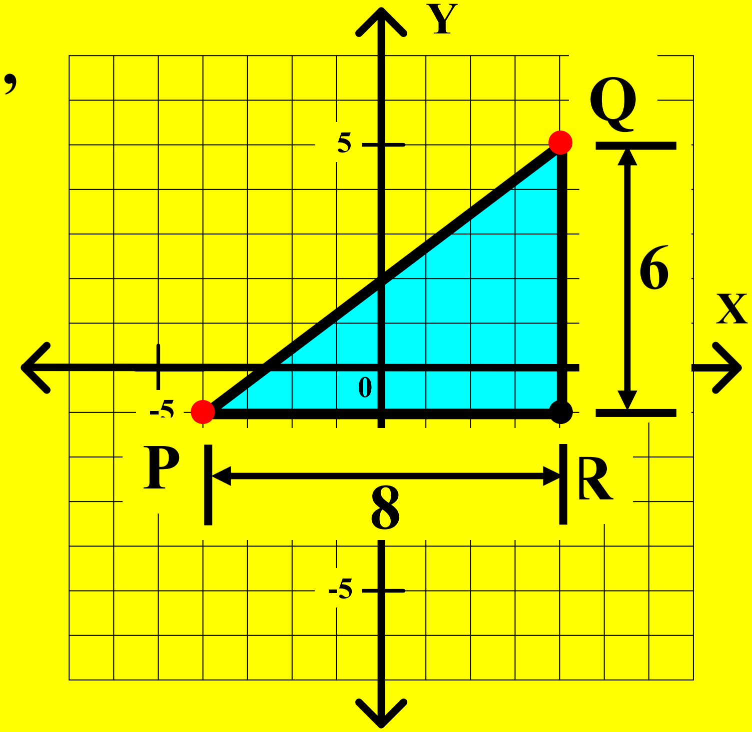
If $y_1 = y_2$, then line segment PQ is horizontal.



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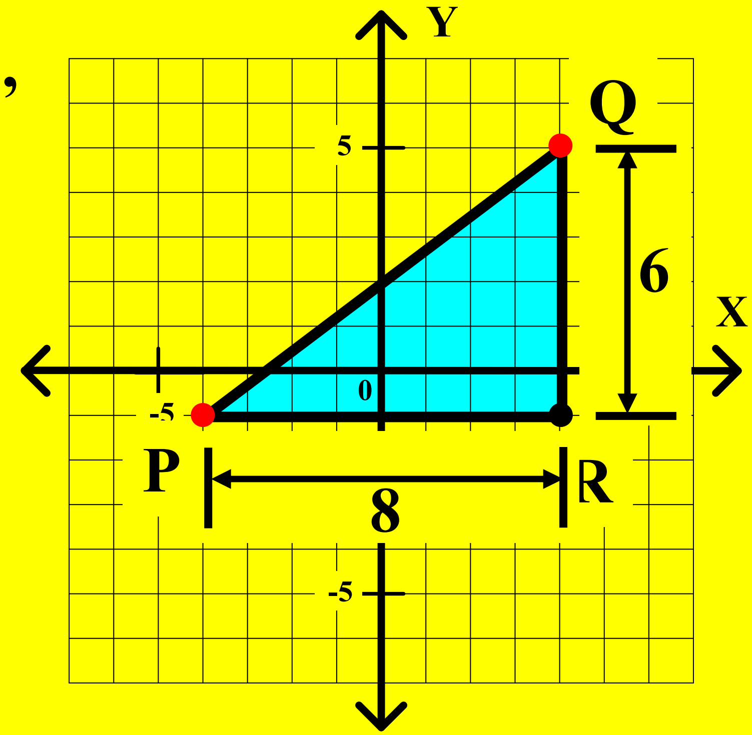
$$PQ = \sqrt{(x_1 - x_2)^2 + 0}$$



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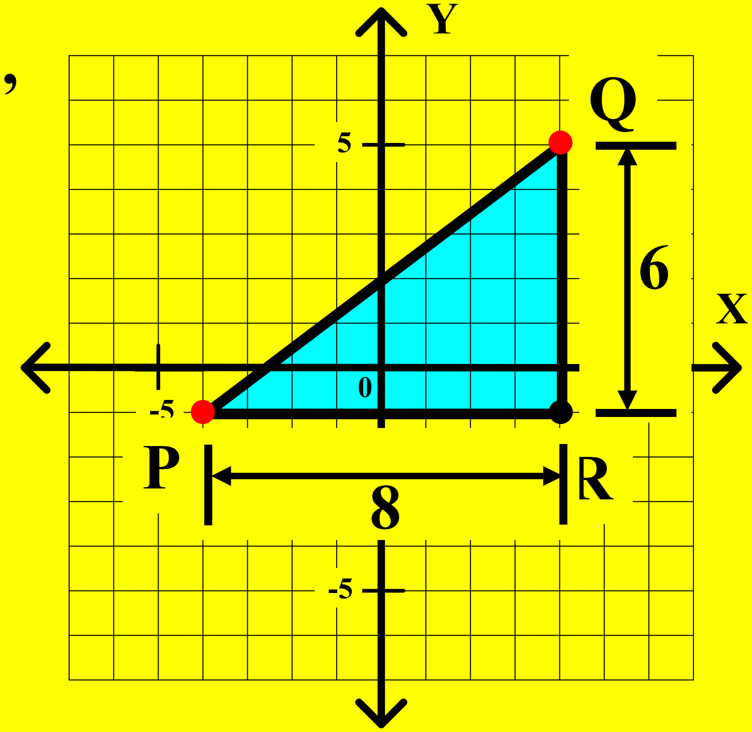

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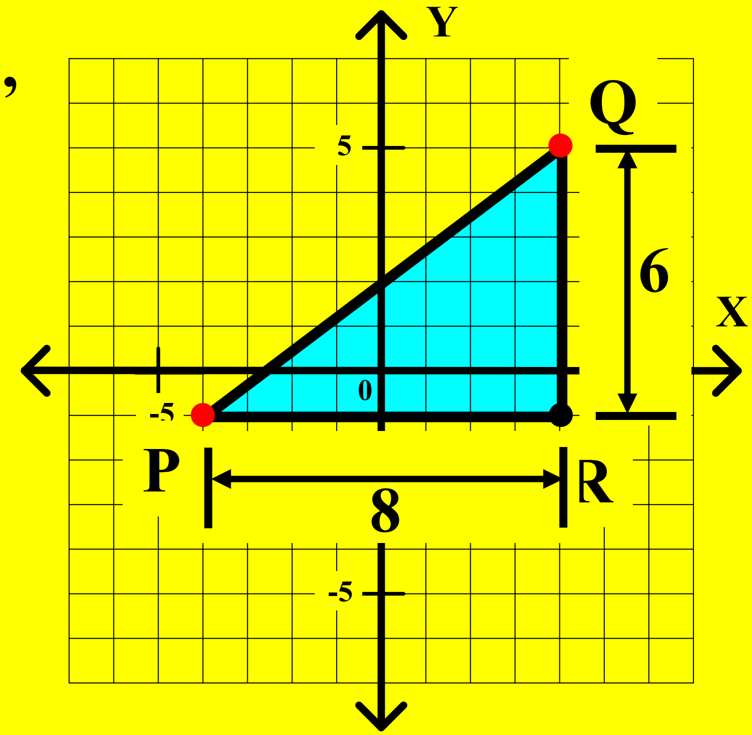

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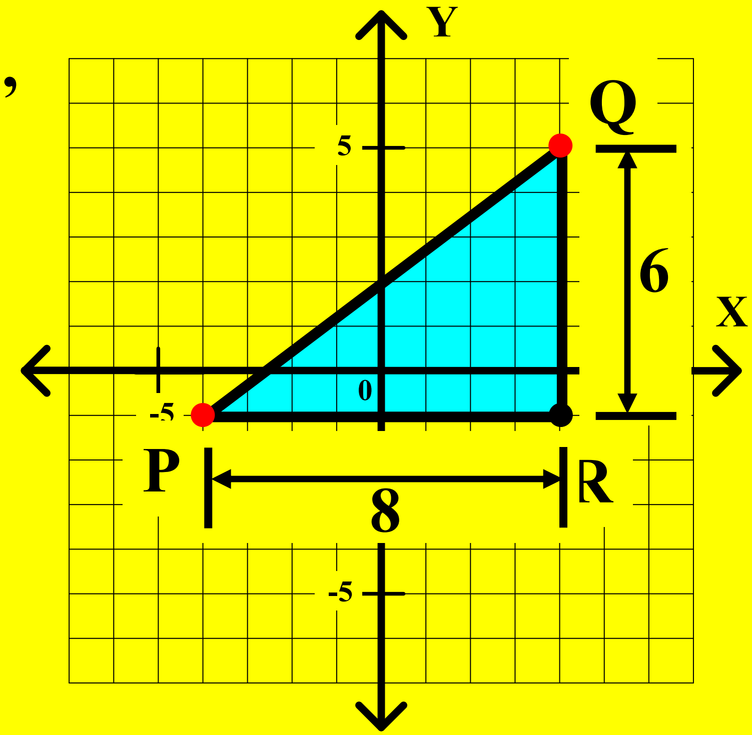

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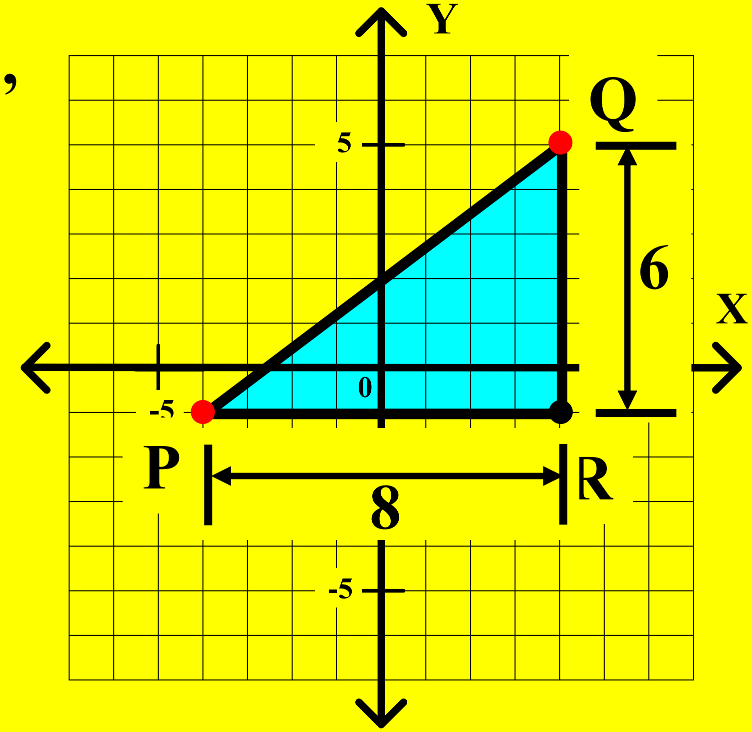

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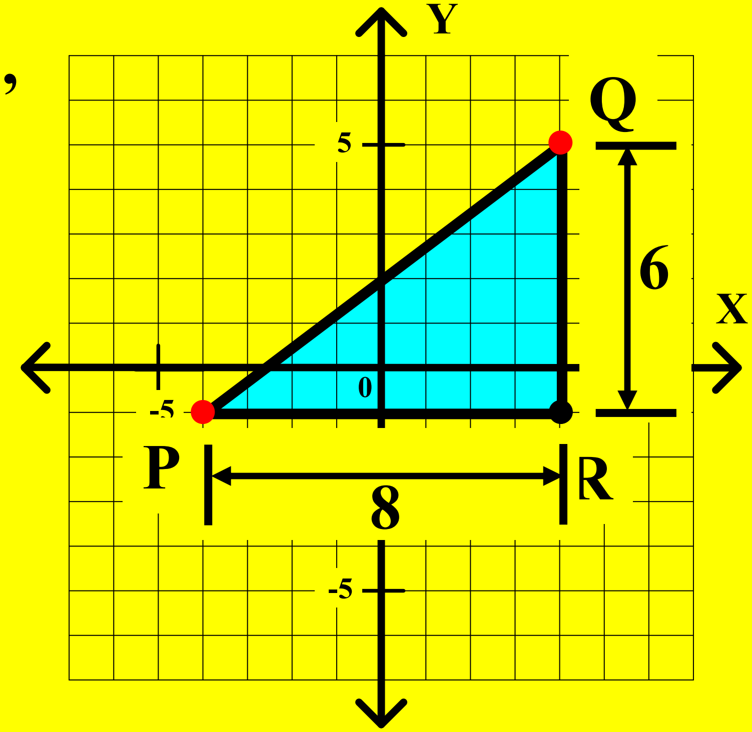

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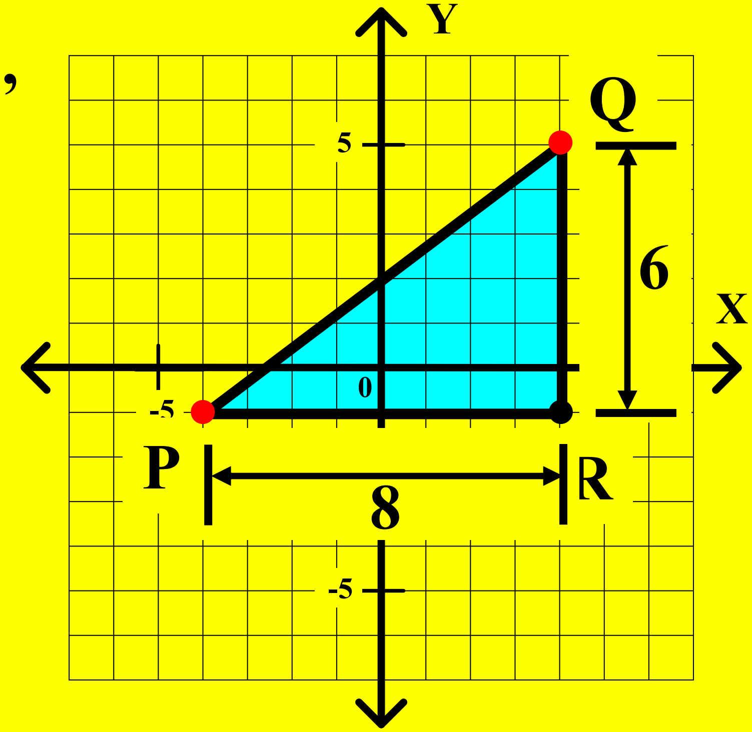

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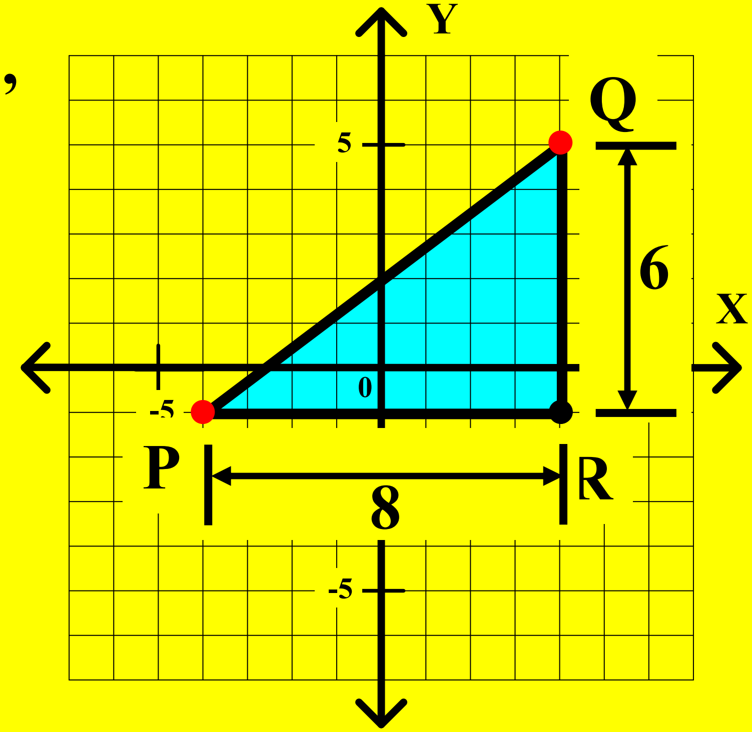

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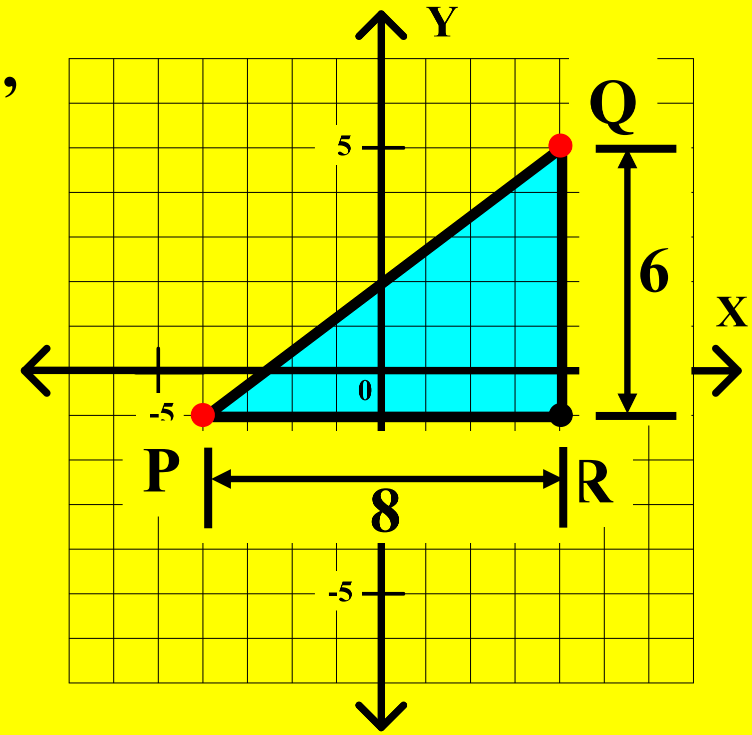

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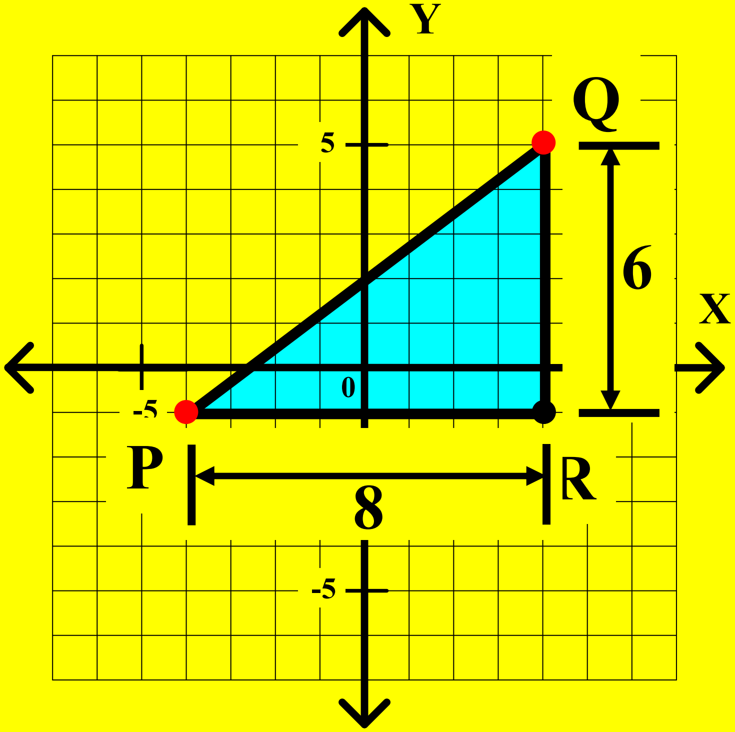
$$PQ = \sqrt{0 + (y_1 - y_2)^2}$$



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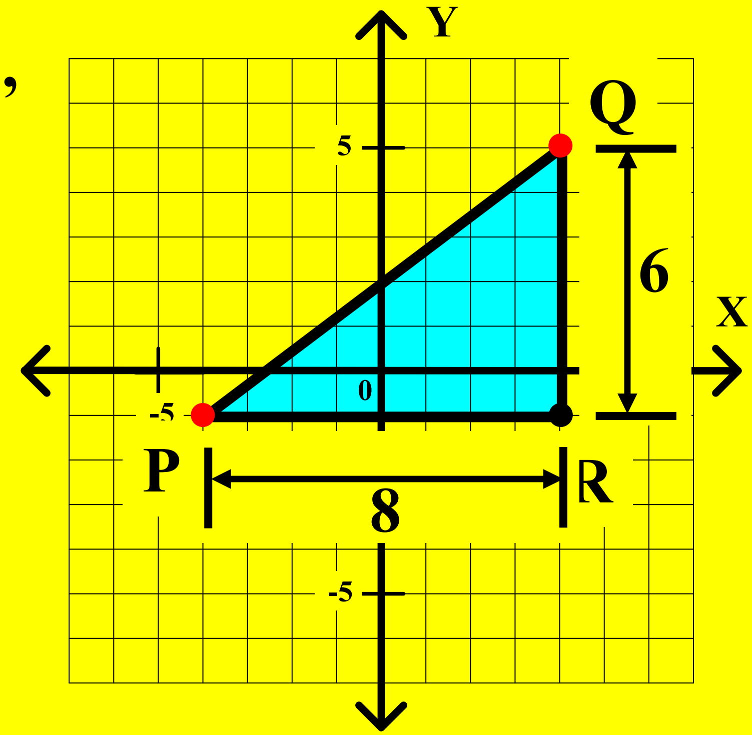

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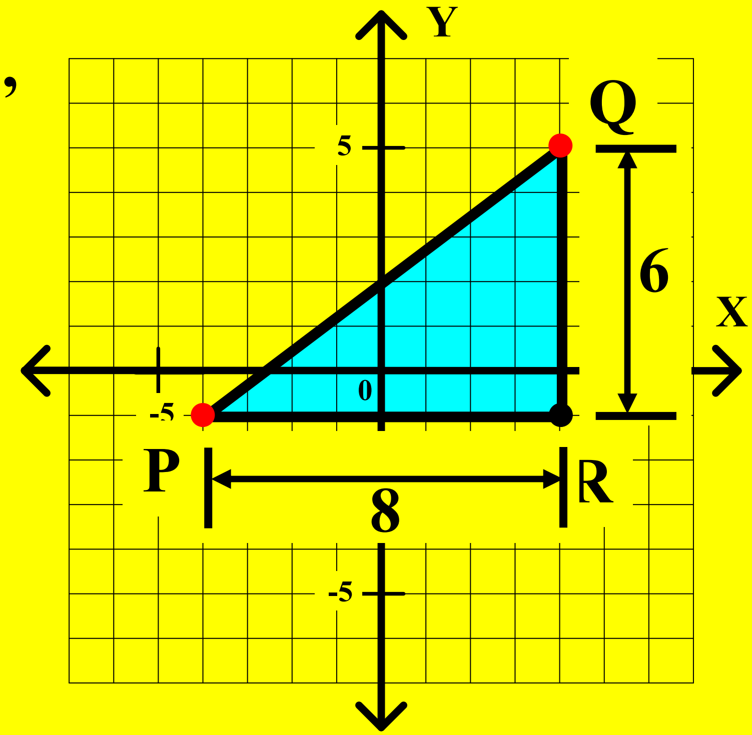
$$PQ = \sqrt{(y_1 - y_2)^2} =$$



$P(x_1, y_1)$ is used to represent point P with x-coordinate x_1 and y-coordinate y_1. $Q(x_2, y_2)$ is used to represent point Q with x-coordinate x_2 and y-coordinate y_2. The distance between points P and Q is represented by PQ.

Introduction to the <u>Distance Formula</u>

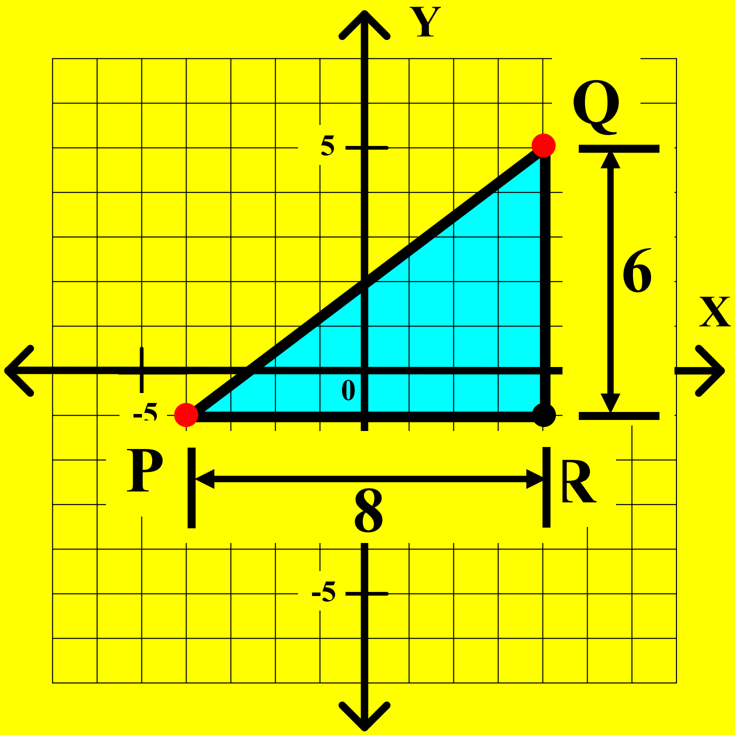
Example 1. Given P(-4, -1) and Q(4, 5), find PQ.

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$, where $x_1 \neq x_2$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Also, if $x_1 = x_2$, then line segment PQ is vertical.

$$PQ = \sqrt{(y_1 - y_2)^2} = |y_1 - y_2|$$



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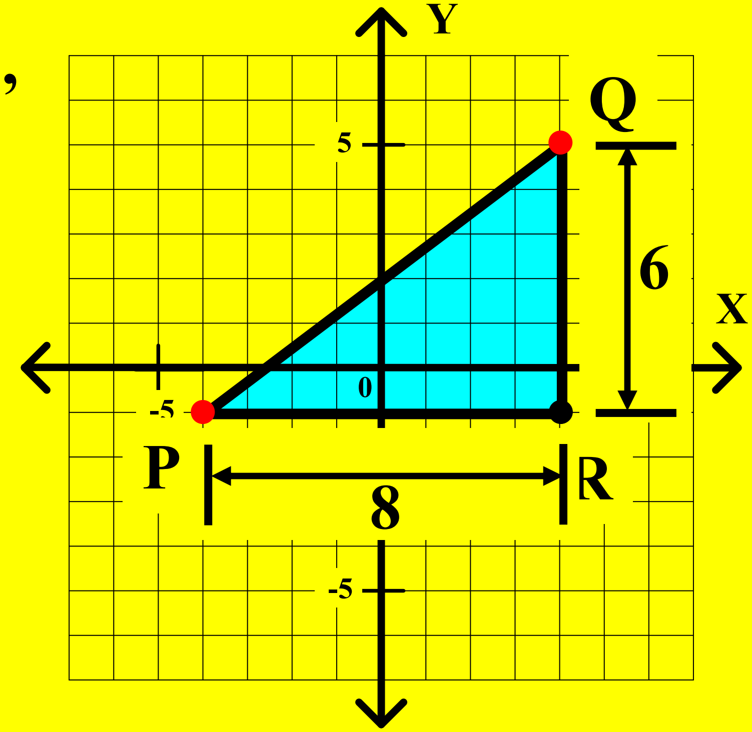
(which is the correct distance).



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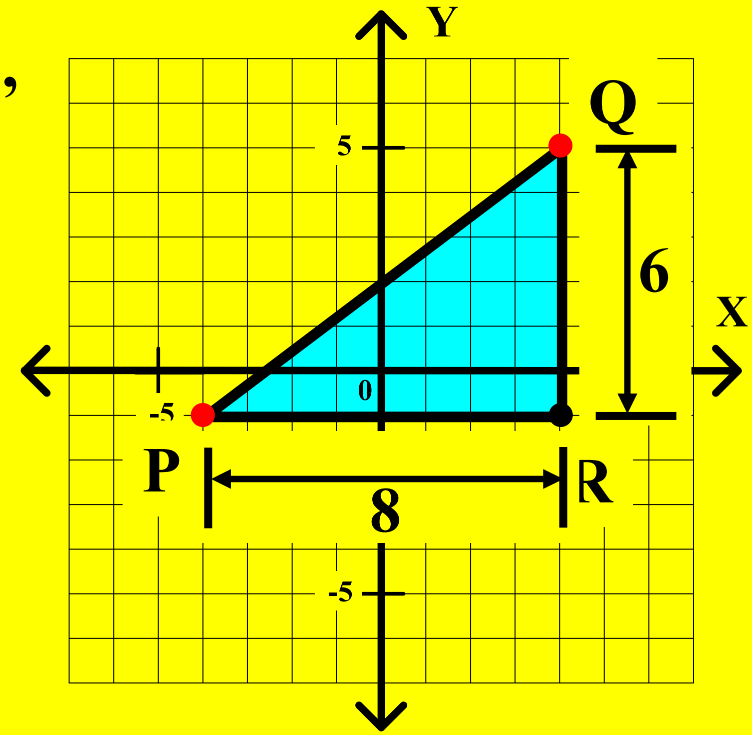

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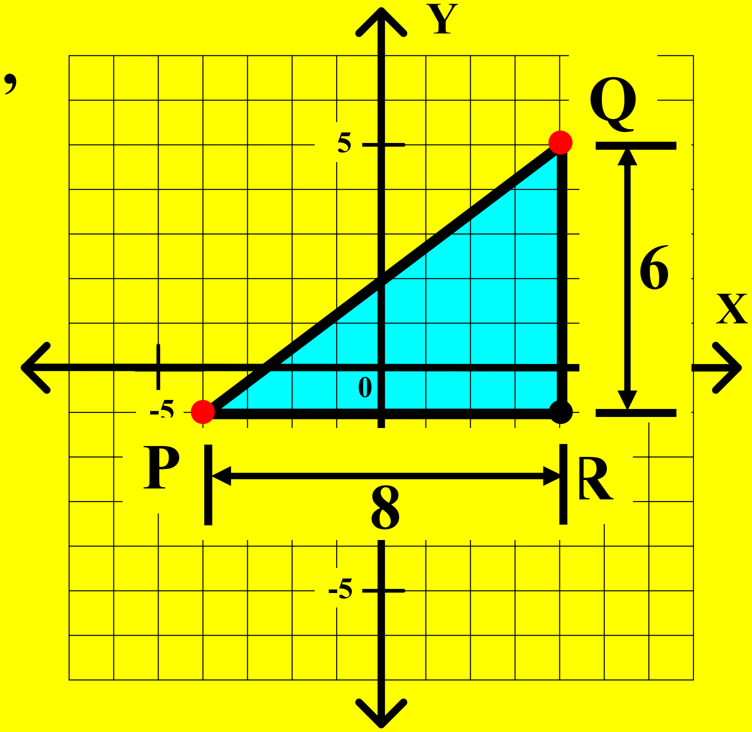

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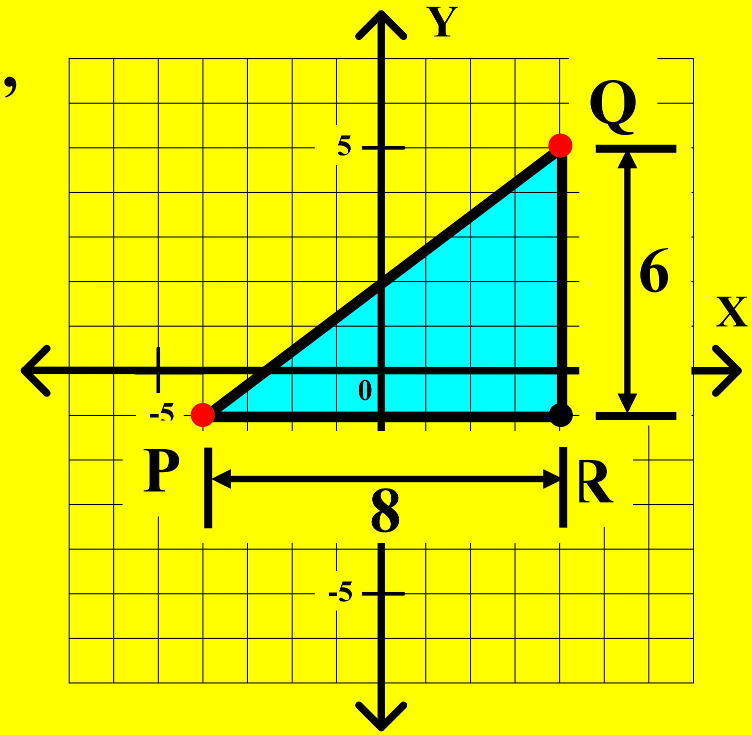

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

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Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

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The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2   Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(\underset{x_1}{3}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 -}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

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The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$PQ = \sqrt{(3 - \underset{x_2}{-1}}$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

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1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + \qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

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1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 +}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

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1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2}$$

y_1

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 -}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - \underset{y_2}{\underset{\uparrow}{5}})^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} \quad =$$

$$=$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

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$$= \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} \quad =$$

$$= \sqrt{(4)^2 + }$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2 + (-3)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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The Distance Formula

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The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. $P(3, 2)$; $Q(-1, 5)$; $PQ =$ ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2 + (-3)^2} = \sqrt{16 \qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2 + (-3)^2} = \sqrt{16 + }$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ________

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2 + (-3)^2} = \sqrt{16 + 9} = \sqrt{25}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = ___5___

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2 + (-3)^2} = \sqrt{16 + 9} = \sqrt{25}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

1. P(3, 2) ; Q(-1, 5) ; PQ = **5**

$$PQ = \sqrt{(3 - -1)^2 + (2 - 5)^2} =$$

$$= \sqrt{(4)^2 + (-3)^2} = \sqrt{16 + 9} = \sqrt{25}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = _________

PQ =

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. $P(-3, 4)$; $Q(3, 4)$; $PQ =$ ________

$PQ = \sqrt{}$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(\underset{x_1}{\uparrow}{-3}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 -}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. $P(-3, 4)$; $Q(3, 4)$; $PQ =$ ________

$$PQ = \sqrt{(-3 - \qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - \underset{x_2}{3}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + \qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + \quad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4}$$

y_1

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 -}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 -}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - \underset{\uparrow\, y_2}{4}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} \quad =$$

$$=$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3-3)^2 + (4-4)^2} =$$

$$= \sqrt{(-6)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. $P(-3, 4)$; $Q(3, 4)$; $PQ =$ ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} \quad =$$

$$= \sqrt{(-6)^2 + \quad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3-3)^2 + (4-4)^2} \quad =$$

$$= \sqrt{(-6)^2 + (0)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = __________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} \quad =$$

$$= \sqrt{(-6)^2 + (0)^2} \quad =$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36 + }$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36 + 0}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36 + 0} =$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ________

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36 + 0} = \sqrt{36}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = ___6___

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36 + 0} = \sqrt{36}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

2. P(-3, 4) ; Q(3, 4) ; PQ = **6**

$$PQ = \sqrt{(-3 - 3)^2 + (4 - 4)^2} =$$

$$= \sqrt{(-6)^2 + (0)^2} = \sqrt{36 + 0} = \sqrt{36}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

PQ =

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = _________

$$PQ = \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$PQ = \sqrt{\qquad\qquad}$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$PQ = \sqrt{(\underset{x_1}{4}}$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. $P(4, 1)$; $Q(-3, 3)$; $PQ =$ ________

$$PQ = \sqrt{(4 - \qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - \qquad\qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - \underset{x_2}{\uparrow}{-3}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = _________

$$PQ = \sqrt{(4 - -3)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + \qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + \quad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (\underset{\substack{\uparrow \\ y_1}}{1}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - \quad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 -}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - \underset{y_2}{3}}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} \quad =$$

$$=$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} \quad =$$

$$= \sqrt{\qquad\qquad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2   Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} \quad =$$

$$= \sqrt{(7)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} \quad =$$

$$= \sqrt{(7)^2 + \quad}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} \quad =$$

$$= \sqrt{(7)^2 + (-2)^2}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} =$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. $P(4, 1)$; $Q(-3, 3)$; $PQ =$ ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49 + }$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49 + 4}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49 + 4} =$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = ________

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49 + 4} = \sqrt{53}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = <u>7.3</u>

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49 + 4} = \sqrt{53}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Algebra 2 Class Worksheet #1 Unit 7

Find PQ for each of the following. When appropriate, round your answer to the nearest tenth.

3. P(4, 1) ; Q(-3, 3) ; PQ = **7.3**

$$PQ = \sqrt{(4 - -3)^2 + (1 - 3)^2} =$$

$$= \sqrt{(7)^2 + (-2)^2} = \sqrt{49 + 4} = \sqrt{53}$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

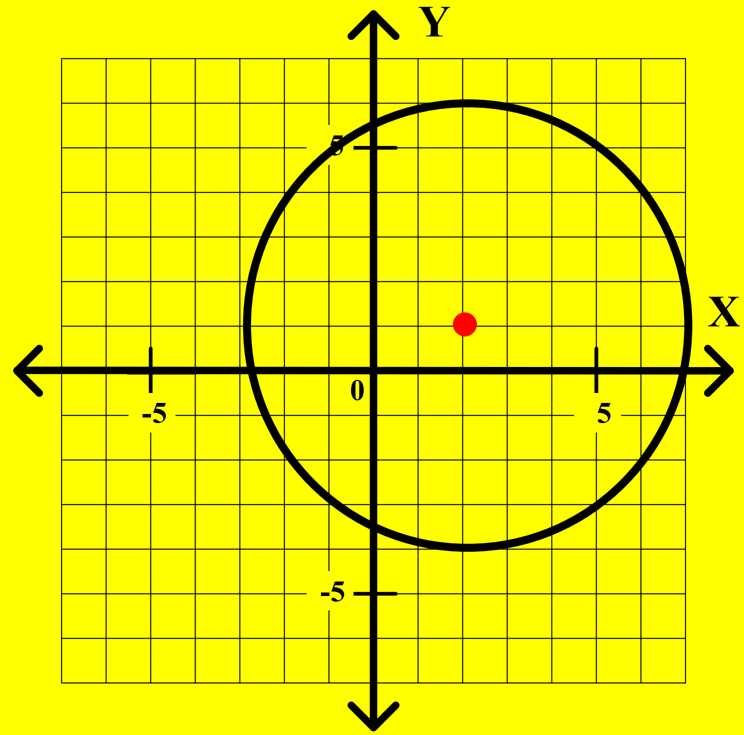
The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

Consider the circle graphed here.



The Distance Formula

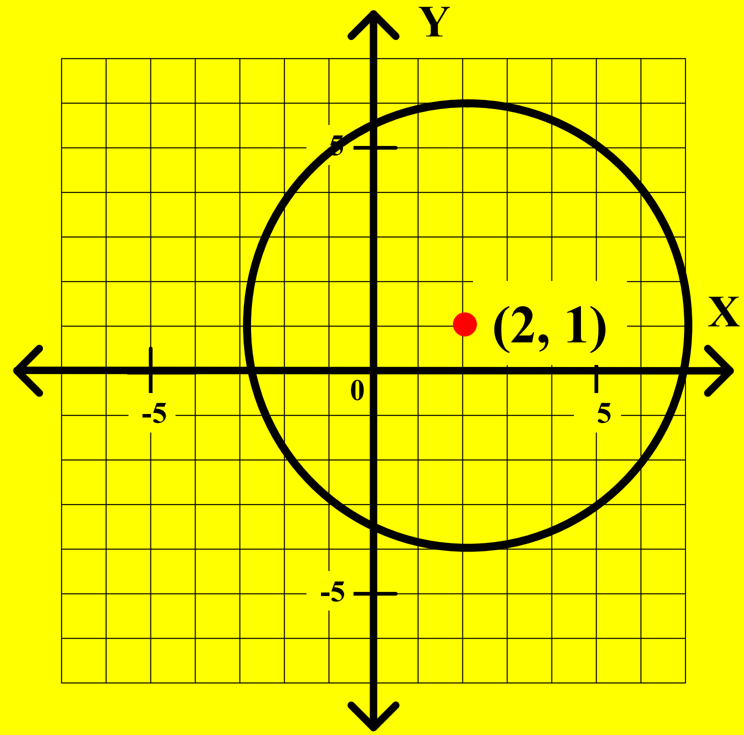
Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1).



The Distance Formula

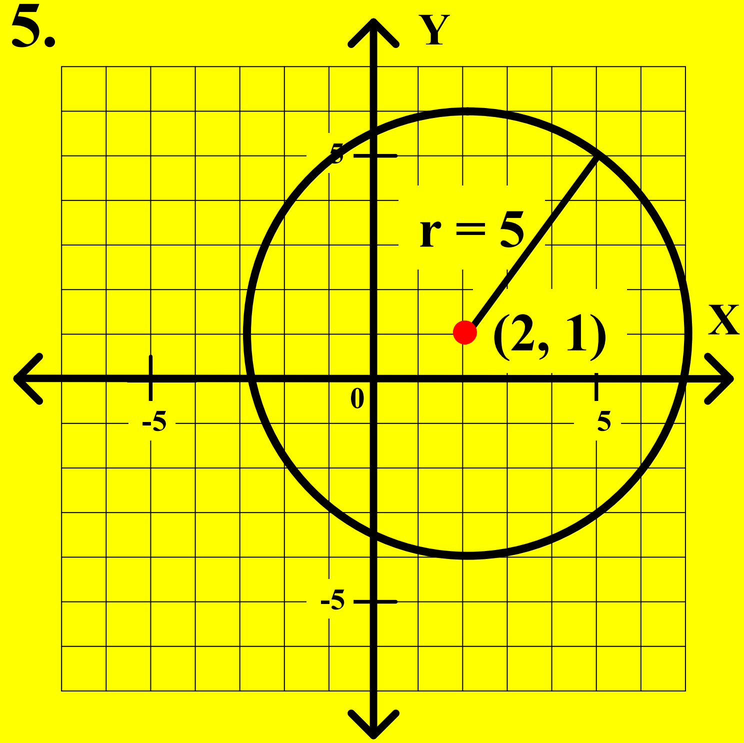
Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.



The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

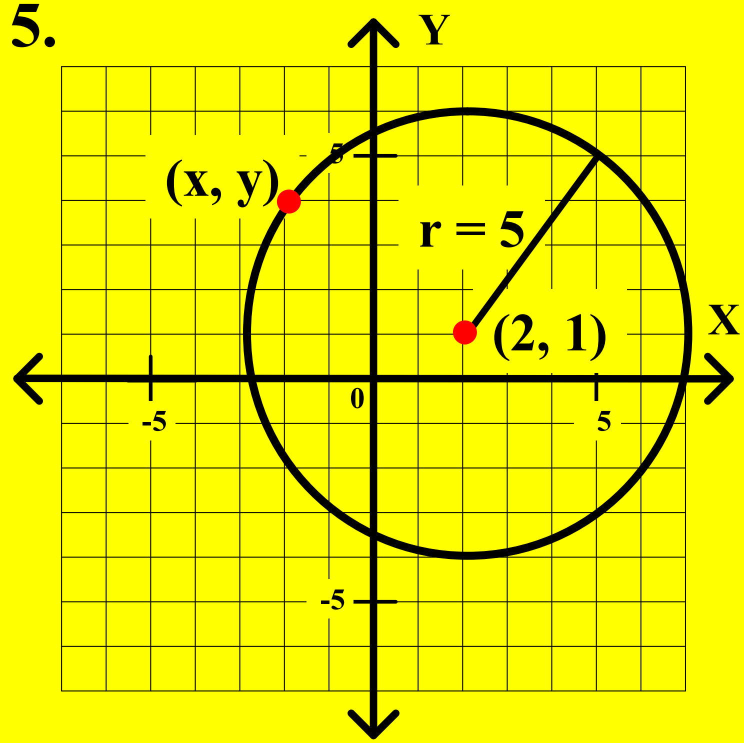
$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Let (x, y) represent any point on the circle.



The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

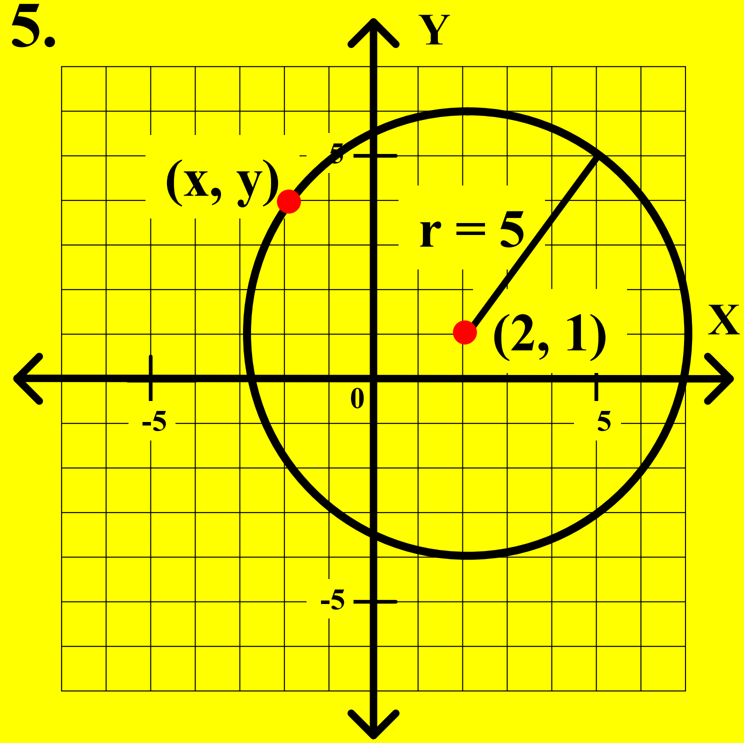
$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Let (x, y) represent any point on the circle. The distance from (x, y) to (2, 1) is 5.



The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

$$PQ = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

The Equation of a Circle

Consider the circle graphed here.

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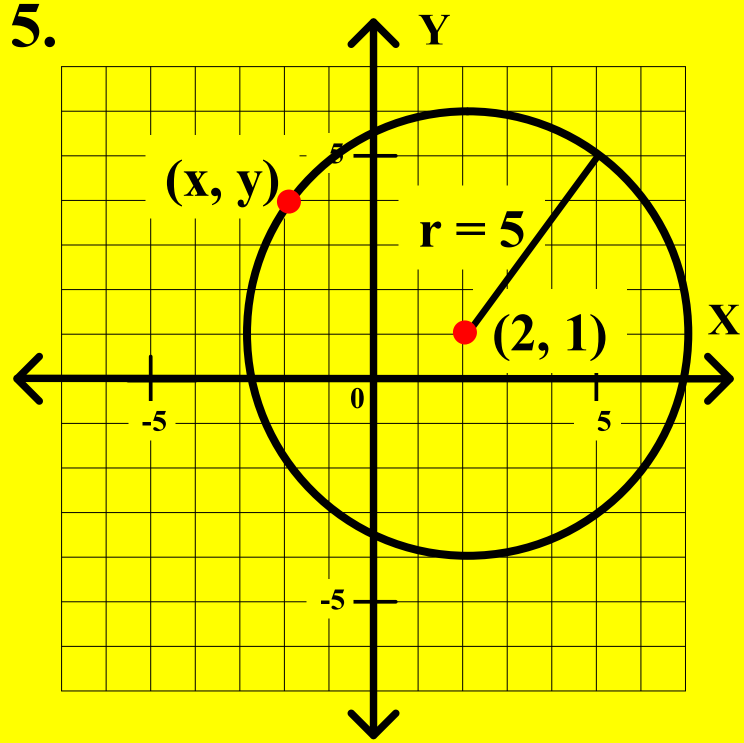
Let (x, y) represent any point on the circle. The distance from (x, y) to (2, 1) is 5. The distance formula can be used to write an equation for the circle.



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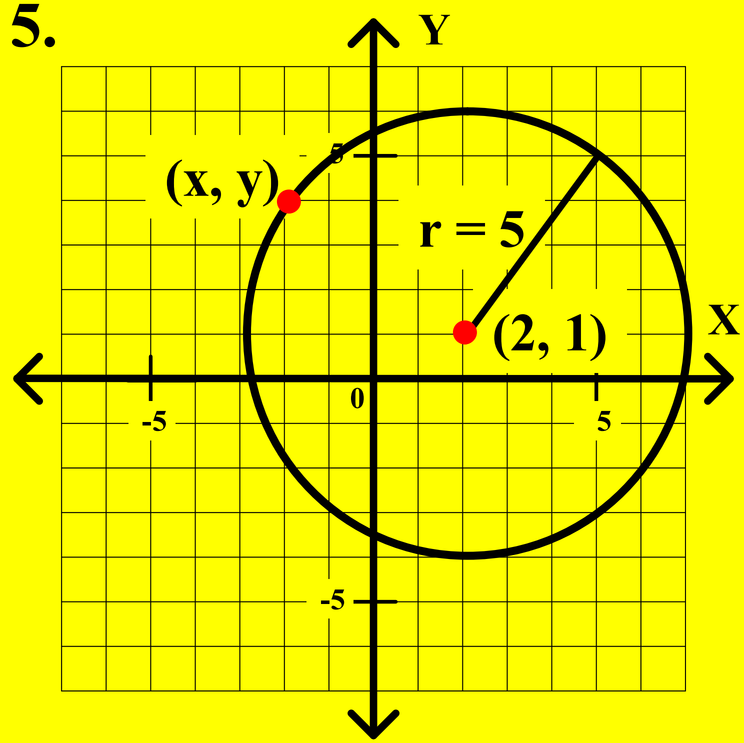

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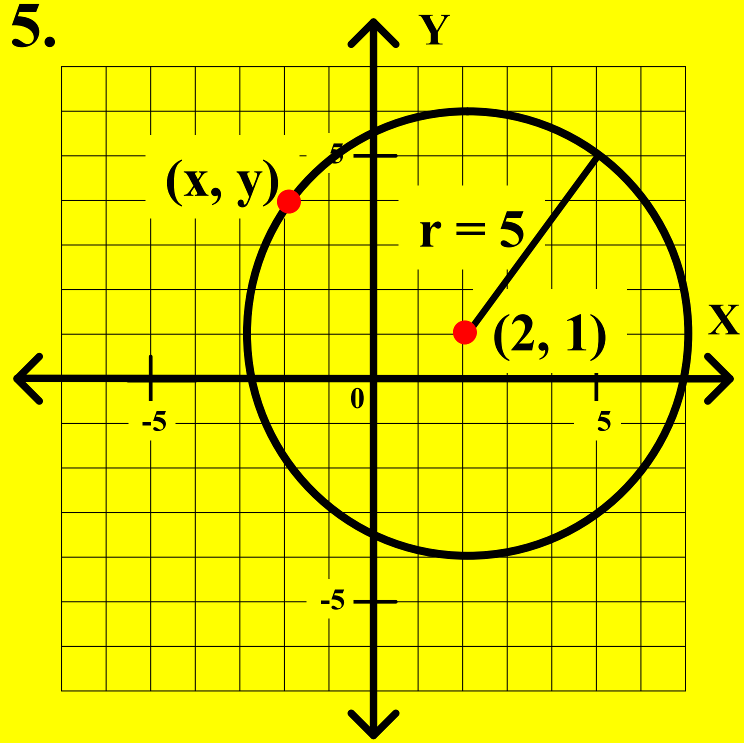
$\sqrt{}$



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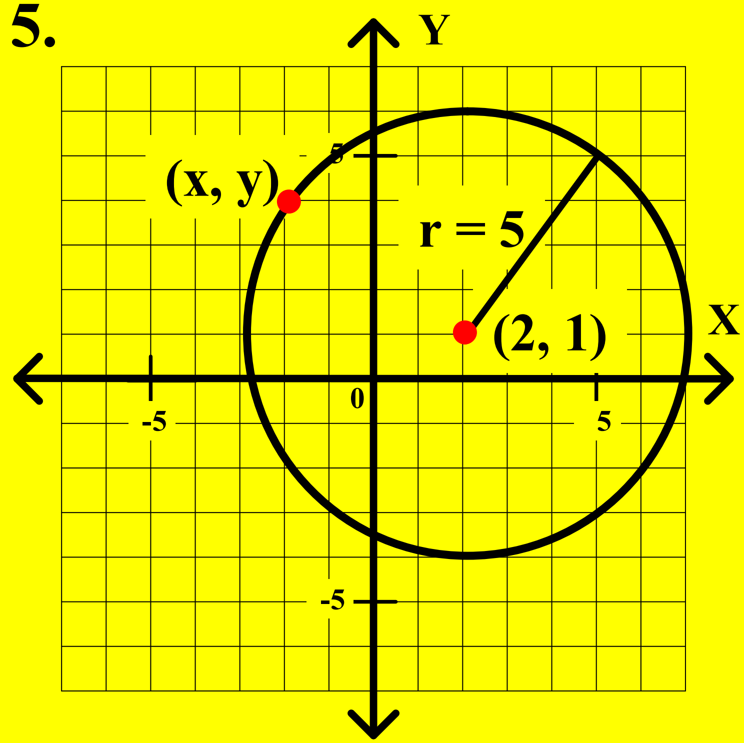
$$\sqrt{(x-2)^2 \qquad\qquad}$$



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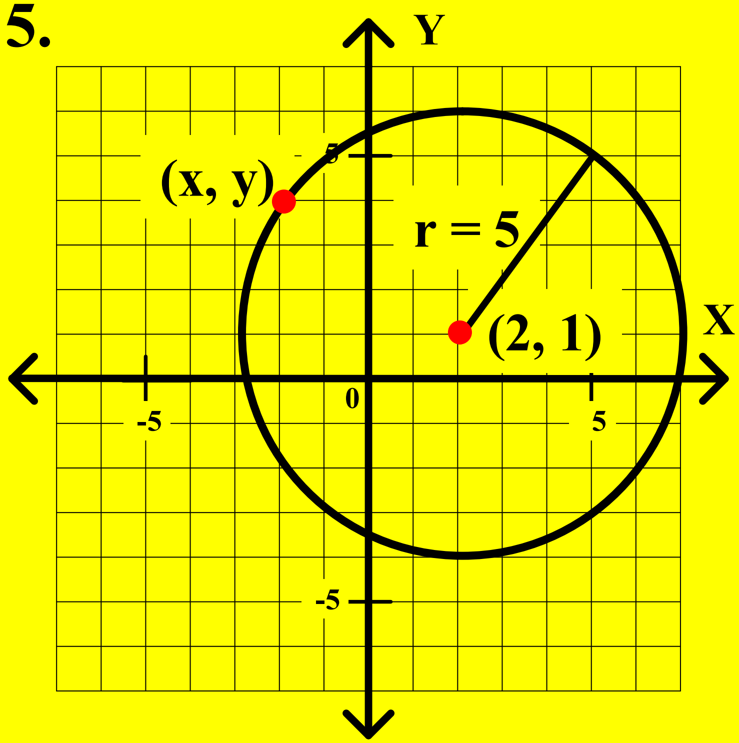

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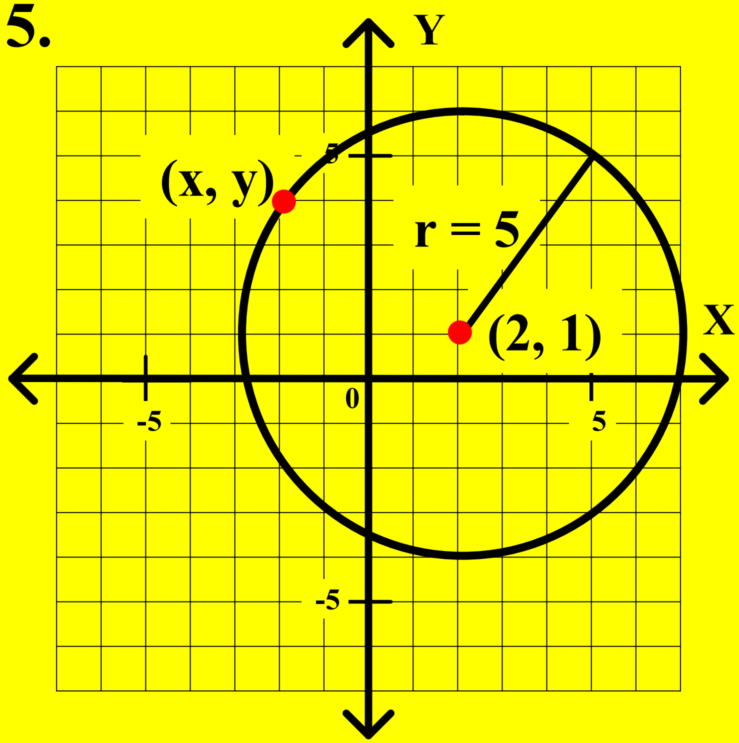
$$\sqrt{(x-2)^2 + (y-1)^2}$$



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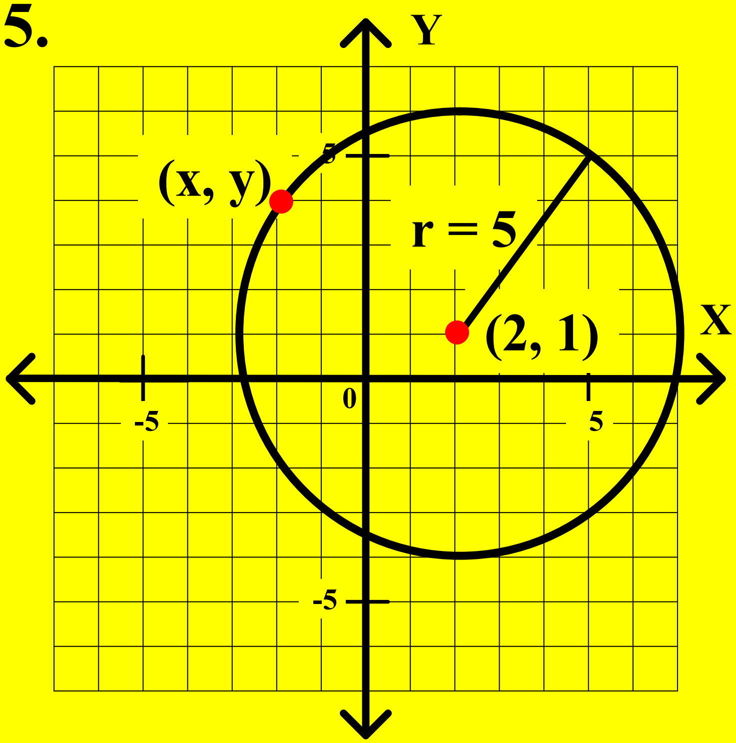

$$\sqrt{(x-2)^2 + (y-1)^2} = 5$$

The Distance Formula

Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$,

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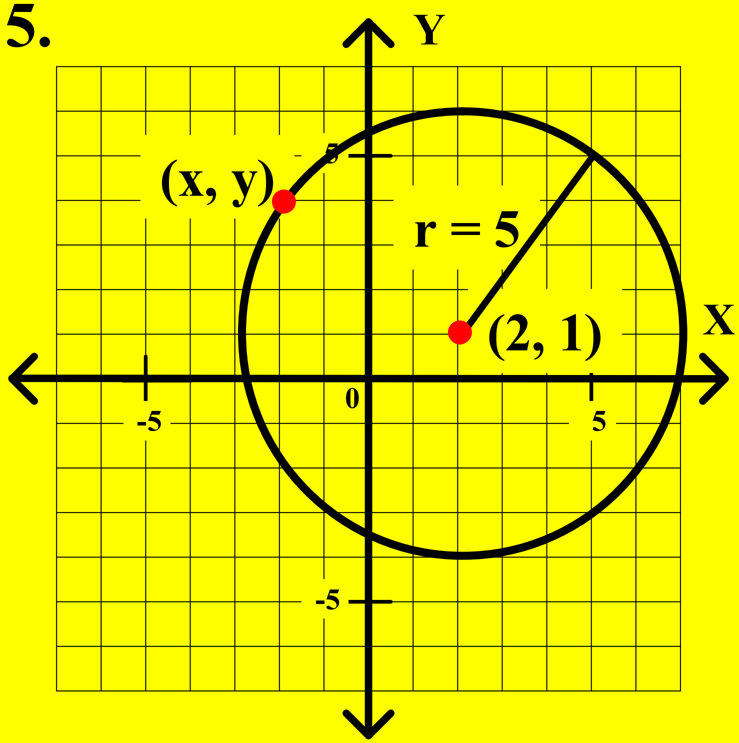

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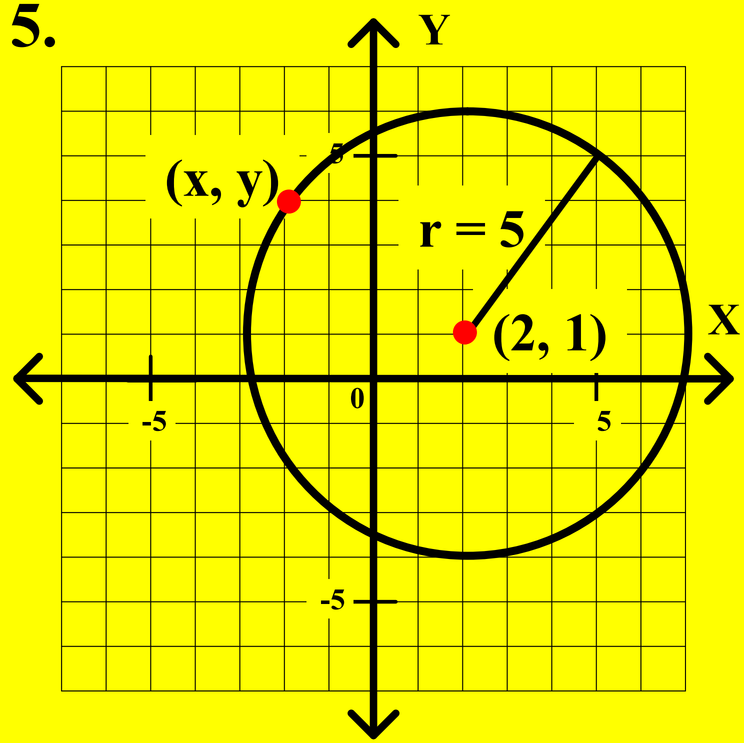


The Equation of a Circle

Consider the circle graphed here.

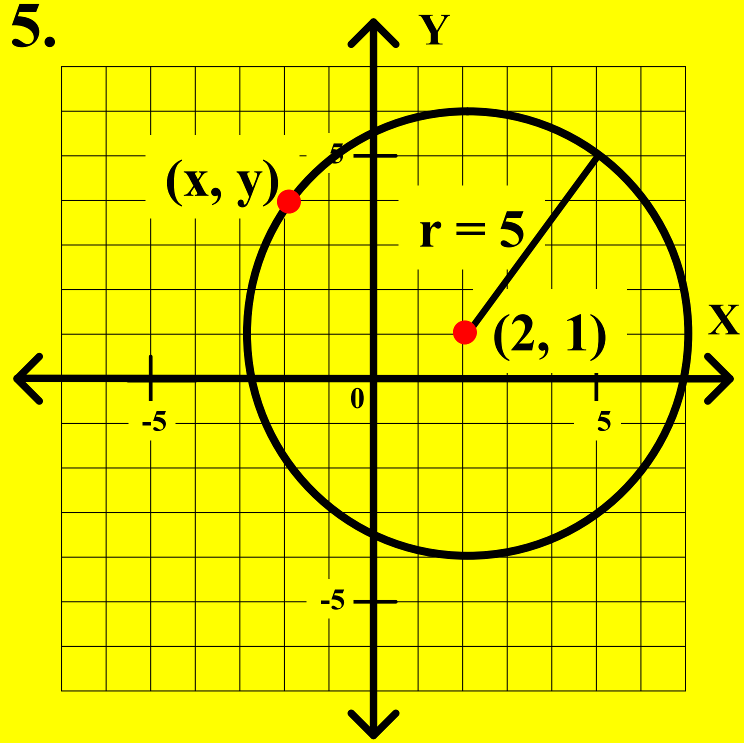
The center is (2, 1), and the radius is 5.

Let (x, y) represent any point on the circle.

$$\sqrt{(x-2)^2 + (y-1)^2} = 5$$

This is equivalent to the equation

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



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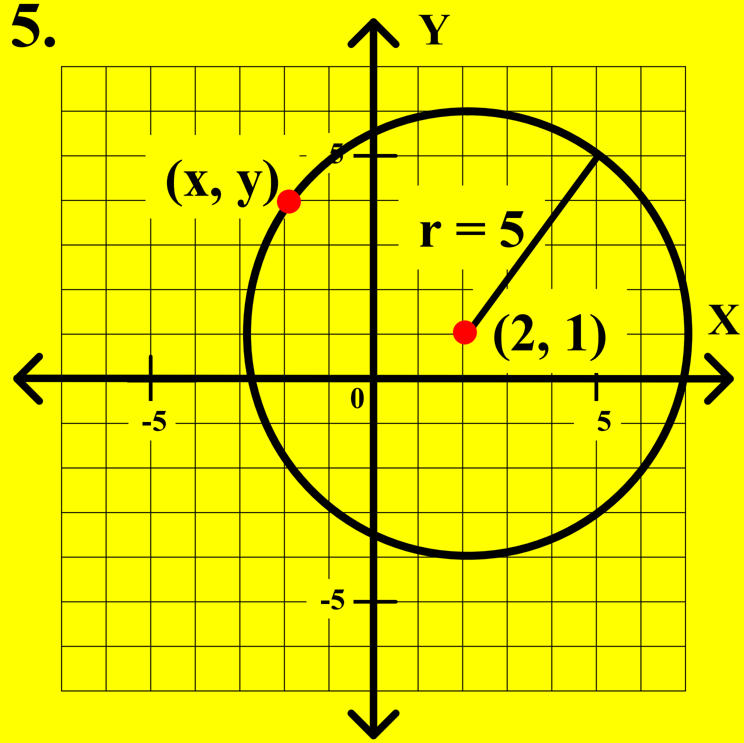


The Equation of a Circle

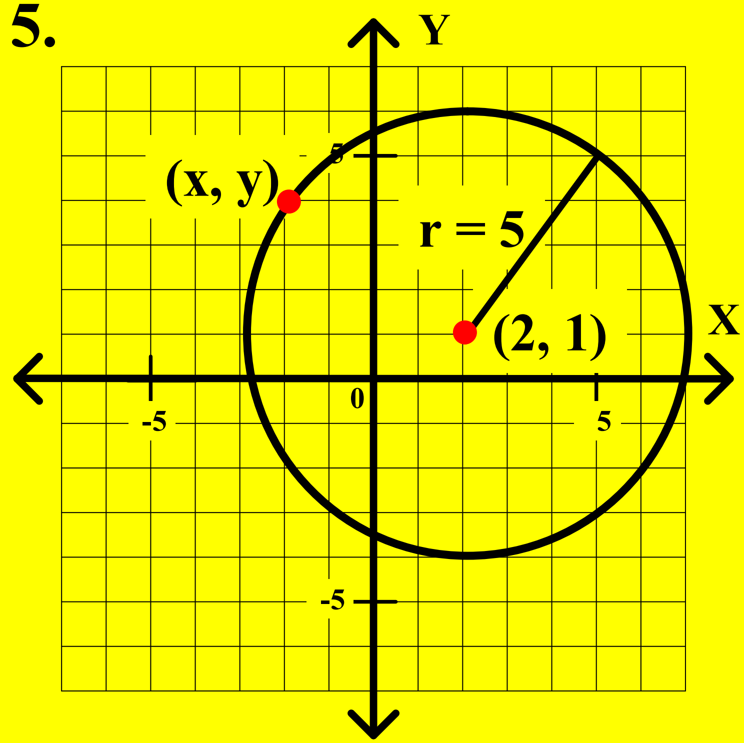
Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Let (x, y) represent any point on the circle.

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

This is called the standard form equation of this circle.



The Equation of a Circle

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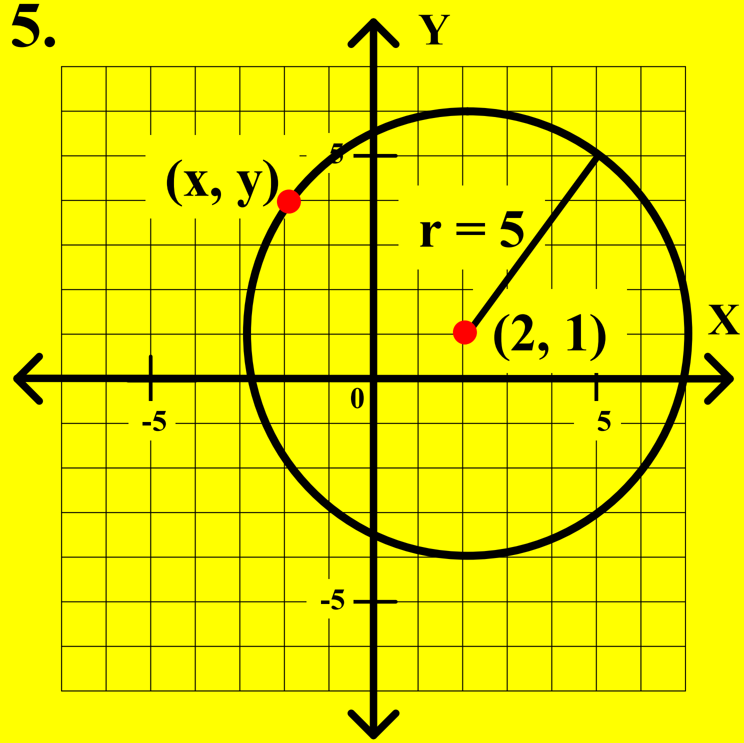
Standard Form Equation

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



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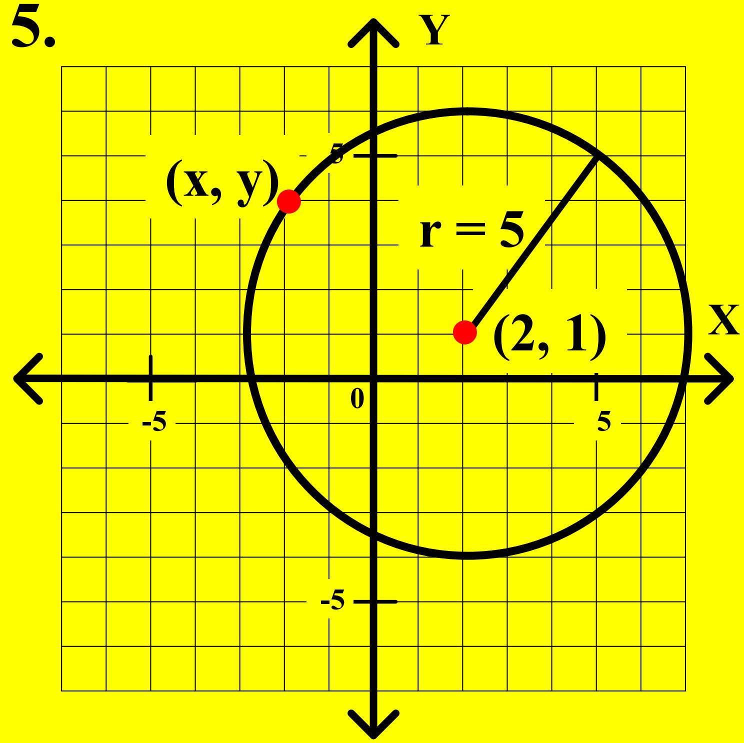


Let (h, k) represent the center of a circle,

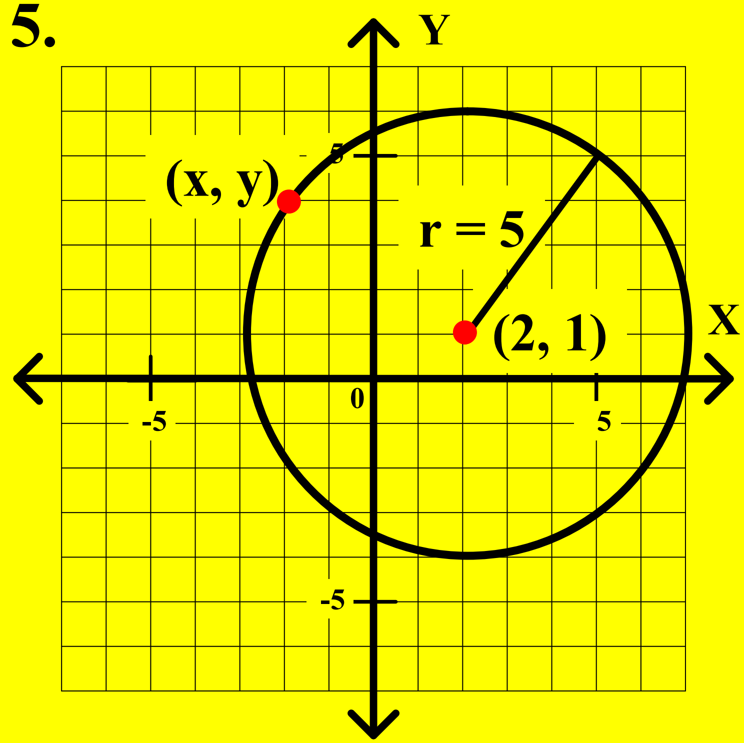
The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Standard Form Equation

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



Let (h, k) represent the center of a circle, and let r represent the radius of the circle,

The Equation of a Circle

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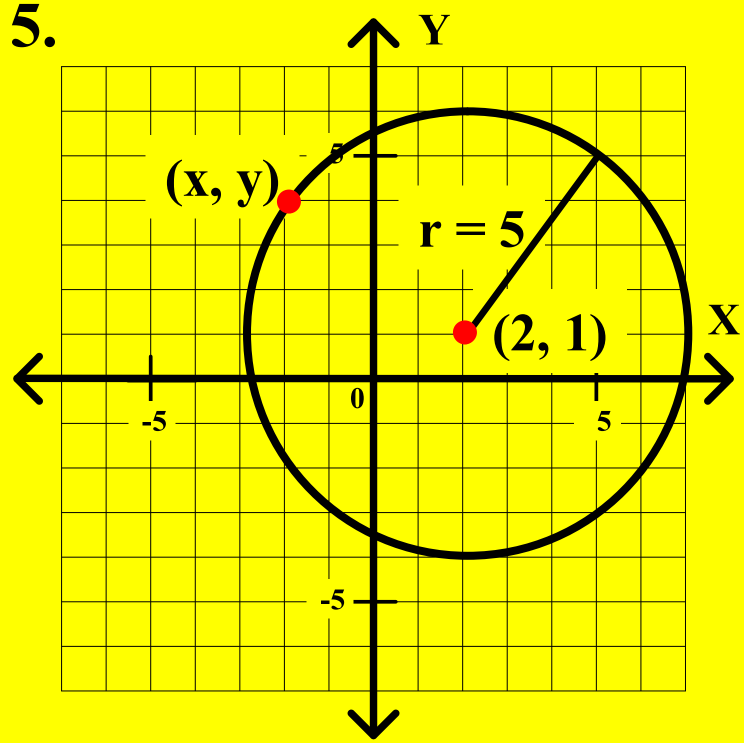
The center is (2, 1), and the radius is 5.

Standard Form Equation

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



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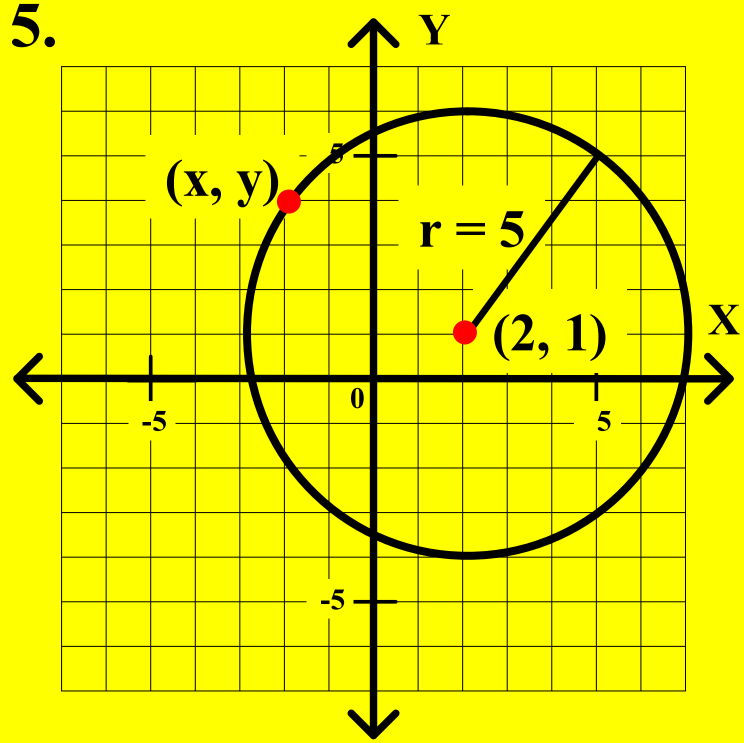


Standard Form Equation

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

Let (h, k) represent the center of a circle, and let r represent the radius of the circle, then the standard form equation of the circle is

$$(x-h)^2$$

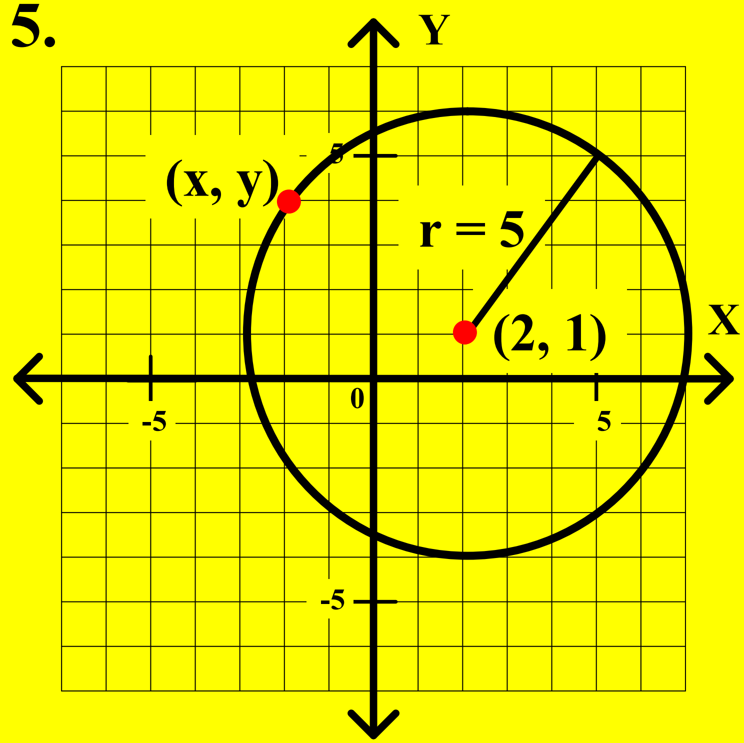
The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Standard Form Equation

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



Let (h, k) represent the center of a circle, and let r represent the radius of the circle, then the standard form equation of the circle is

$(x - h)^2 +$

The Equation of a Circle

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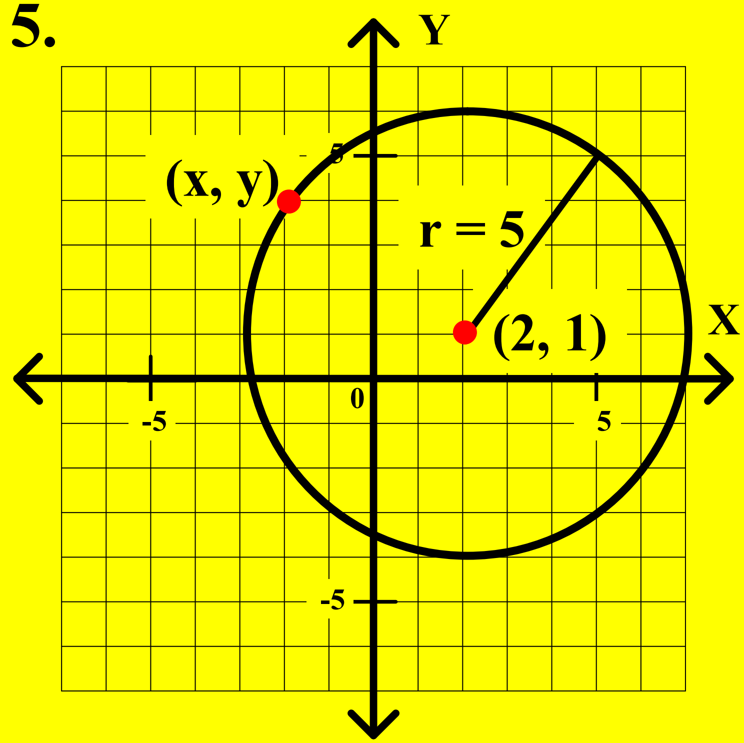
The center is (2, 1), and the radius is 5.

Standard Form Equation

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



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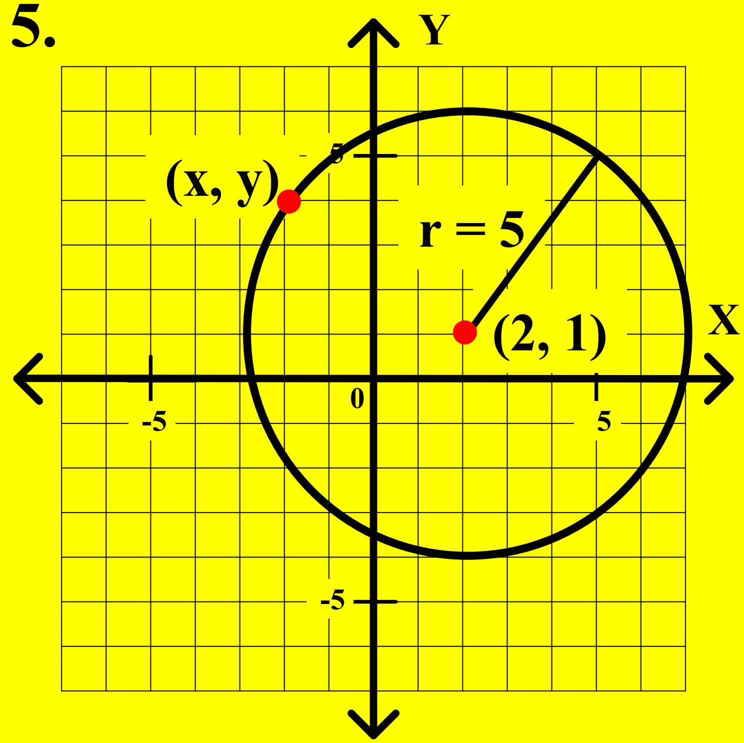

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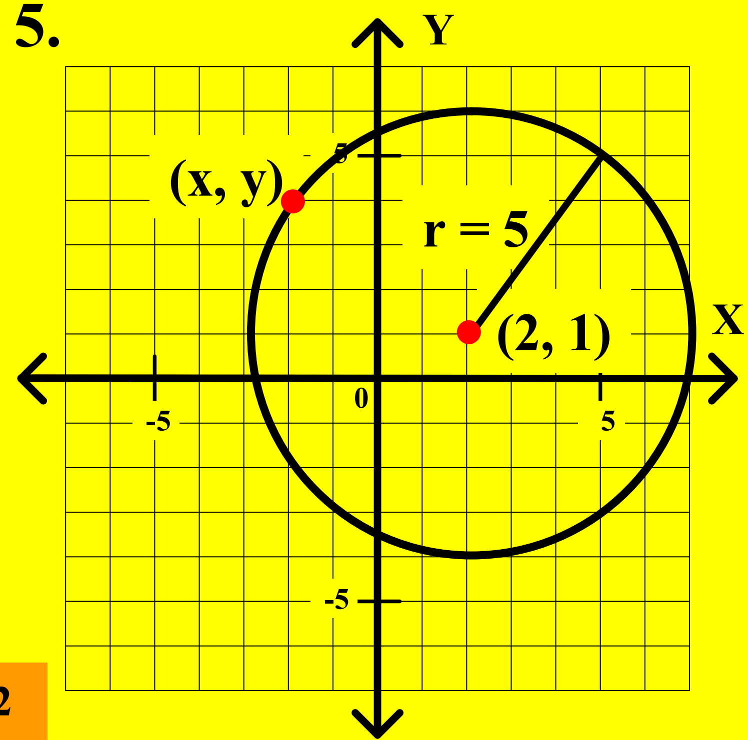

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$$(x - 2)^2 + (y - 1)^2 = 25$$

Let (h, k) represent the center of a circle, and let r represent the radius of the circle, then the standard form equation of the circle is

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

The Equation of a Circle

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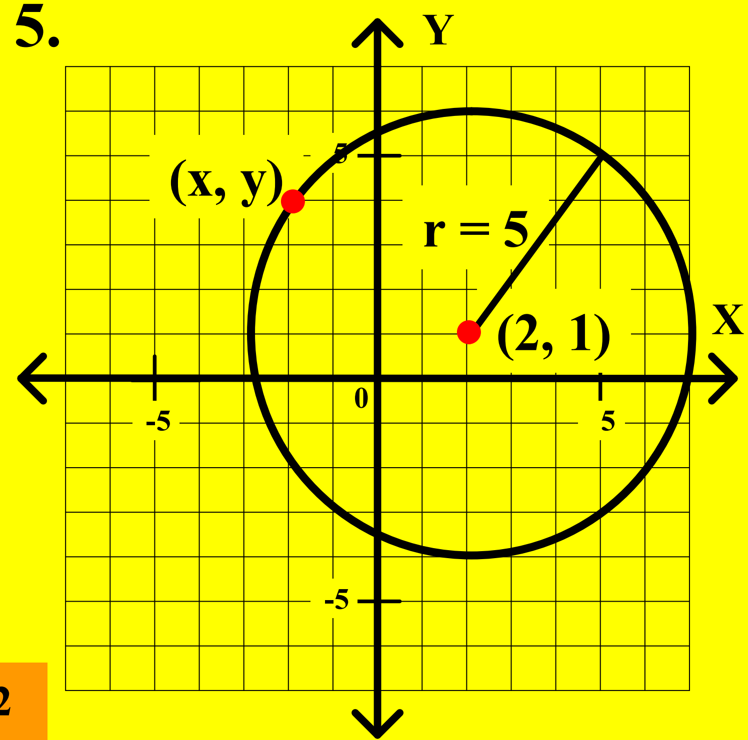
Standard Form Equation

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



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

Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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

The Equation of a Circle

Consider the circle graphed here.

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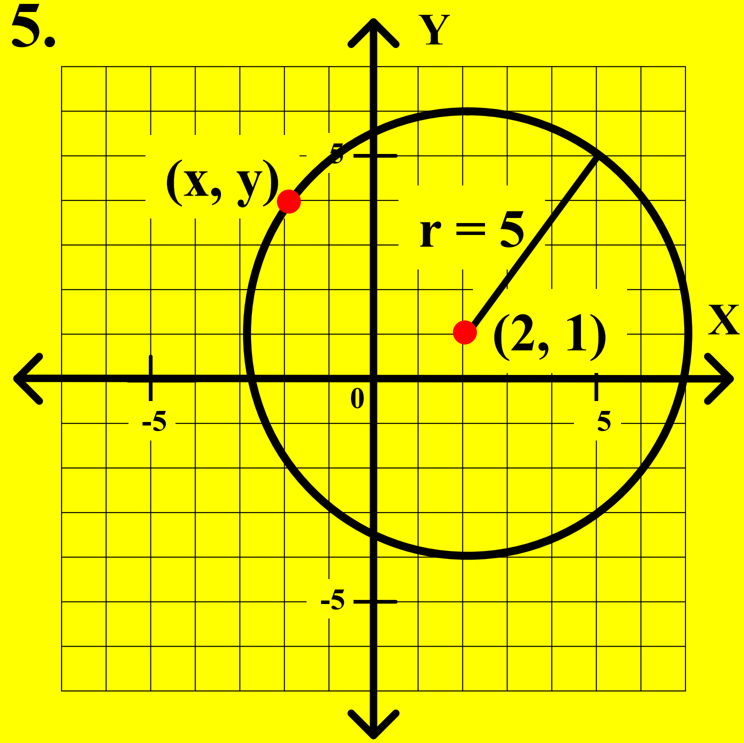

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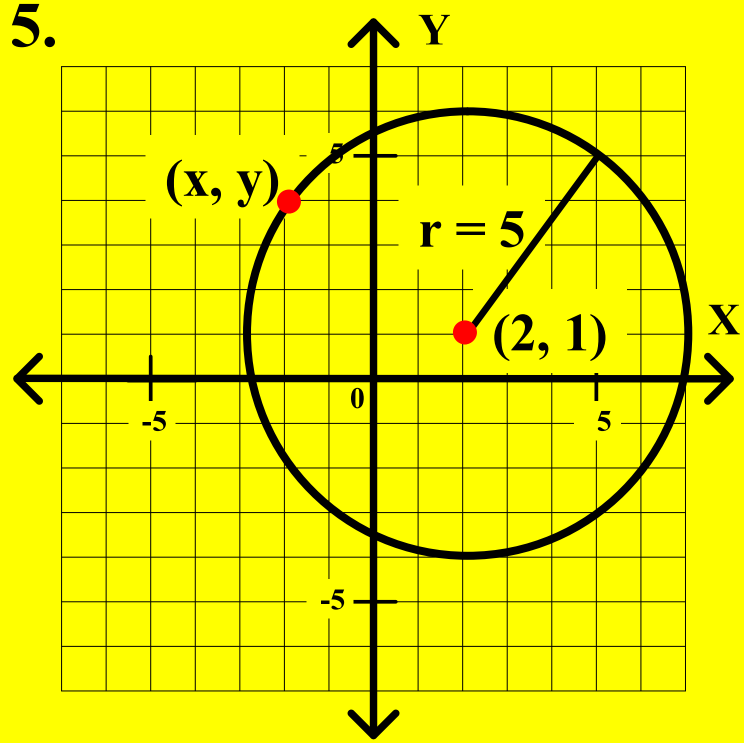

Standard Form Equation

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

The following equations are equivalent to this equation.

Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

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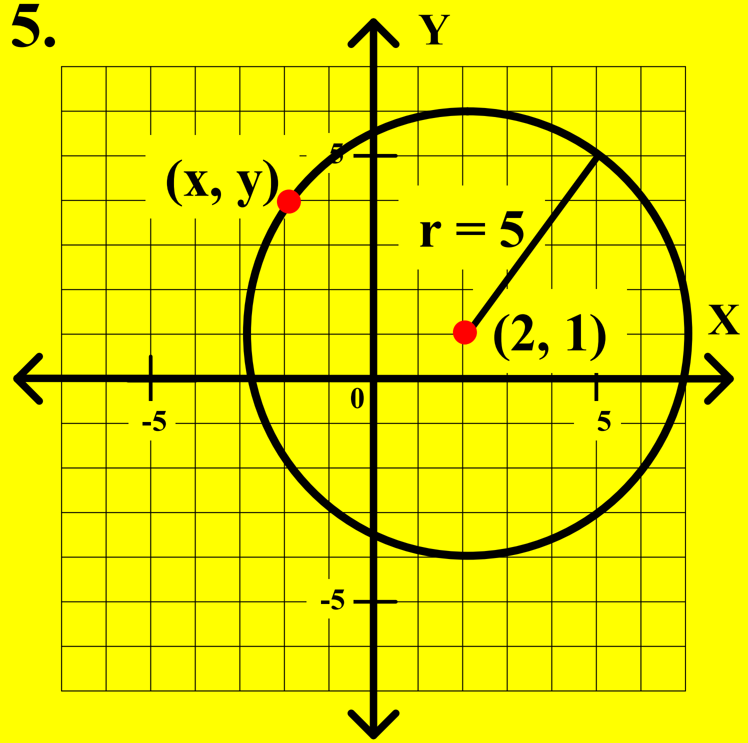

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The Equation of a Circle

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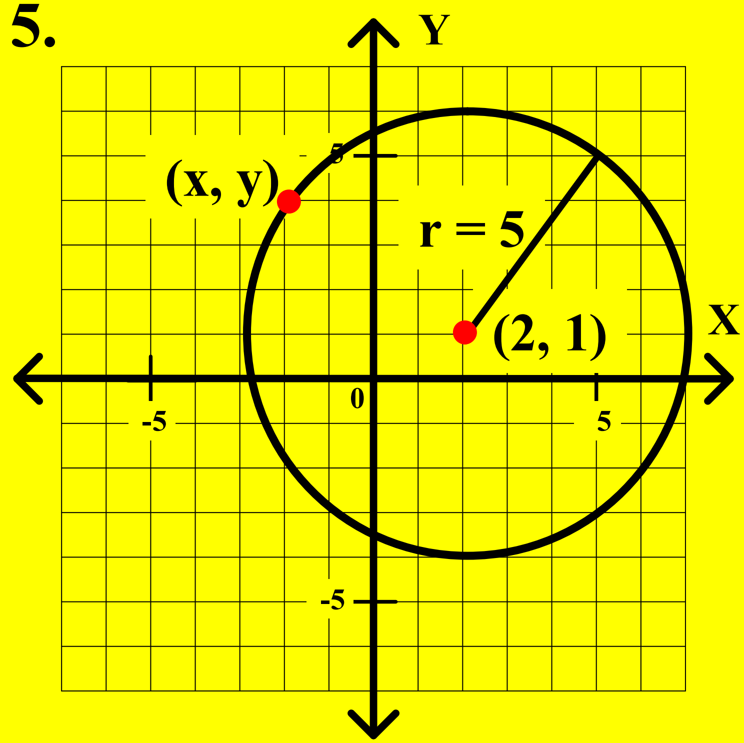
Standard Form Equation

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



The following equations are equivalent to this equation.

$(x^2$

Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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

The Equation of a Circle

Consider the circle graphed here.

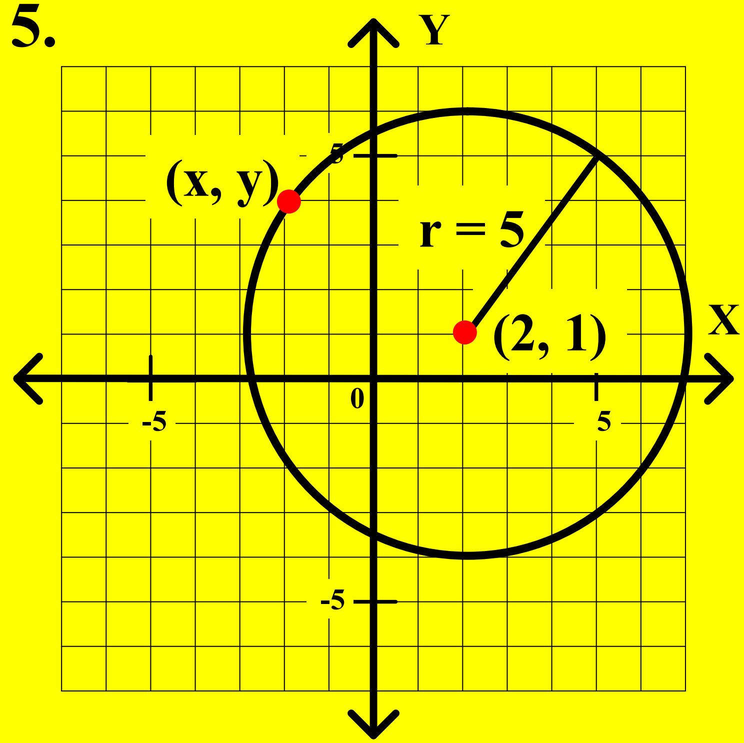
The center is (2, 1), and the radius is 5.

Standard Form Equation

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

The following equations are equivalent to this equation.

$(x^2 - 4x$



Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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

The Equation of a Circle

Consider the circle graphed here.

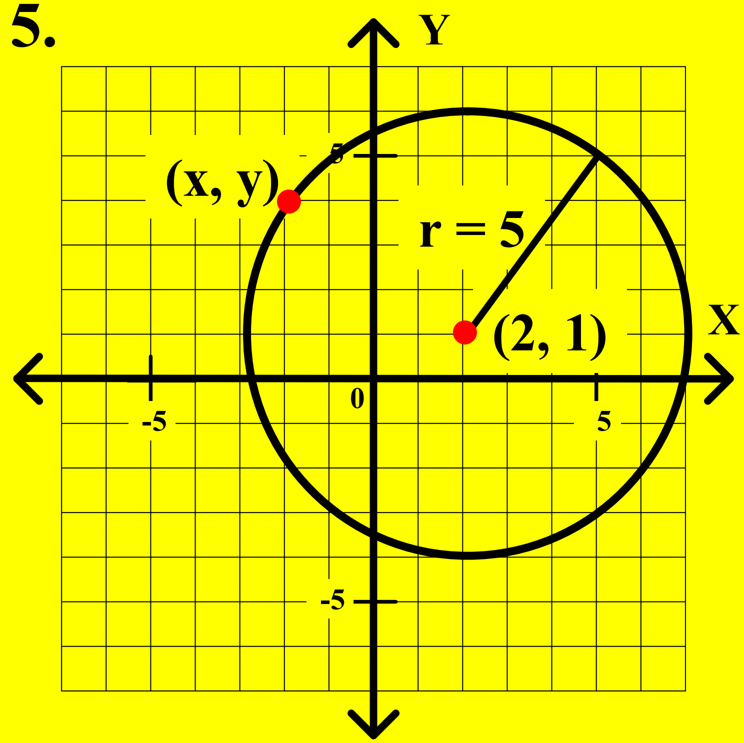
The center is (2, 1), and the radius is 5.

Standard Form Equation

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

The following equations are equivalent to this equation.

$$(x^2 - 4x + 4)$$



Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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The Equation of a Circle

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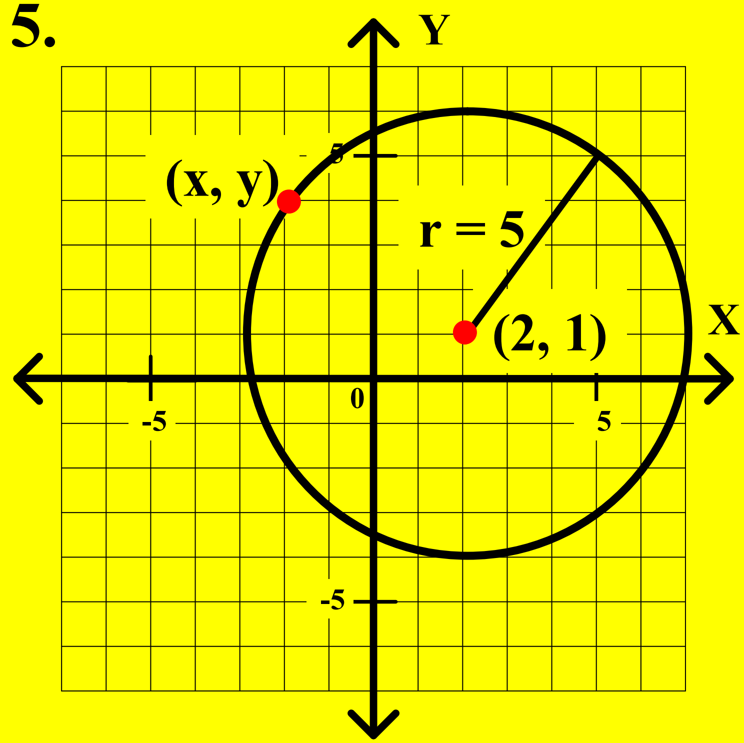
$$(x - 2)^2 + (y - 1)^2 = 25$$



The following equations are equivalent to this equation.

$(x^2 - 4x + 4) +$

Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

The Equation of a Circle

Consider the circle graphed here.

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Standard Form Equation

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The following equations are equivalent to this equation.

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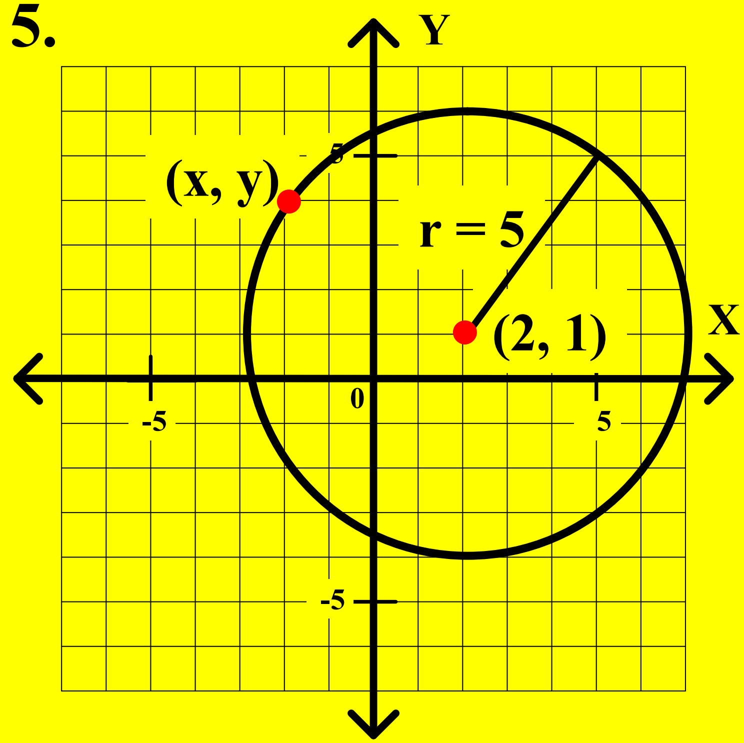

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Center: (h, k) Radius: r

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

The Equation of a Circle

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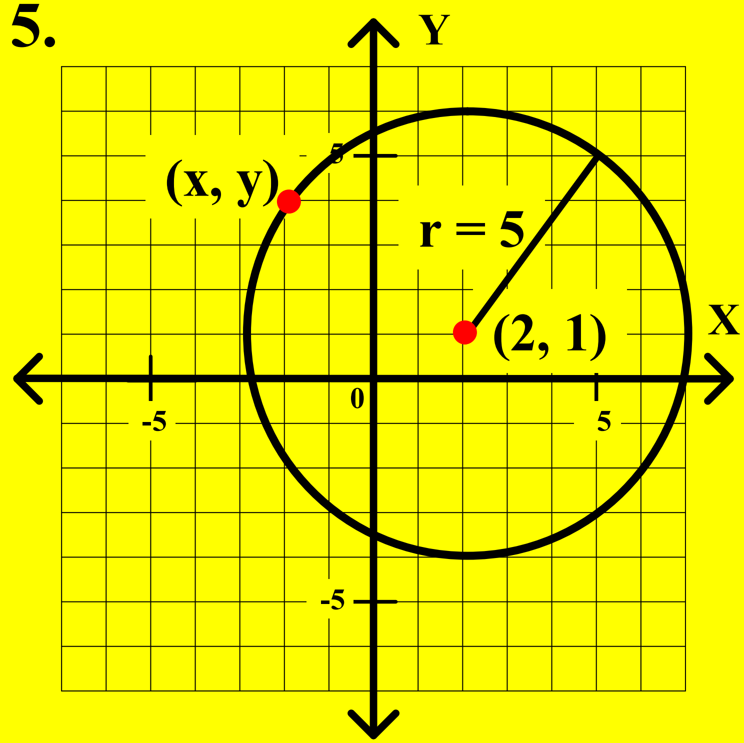
Standard Form Equation

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

The following equations are equivalent to this equation.

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



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Standard Form Equation

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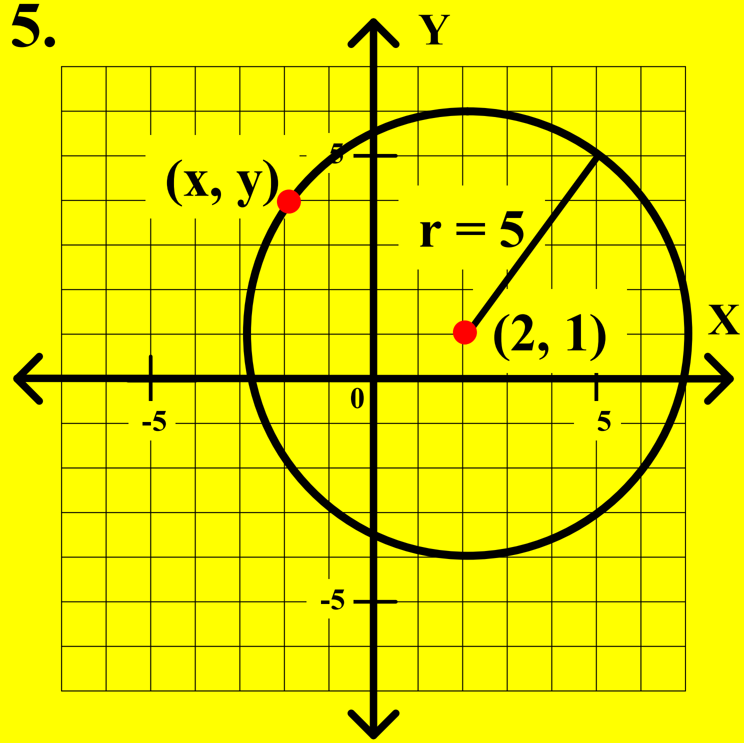
The following equations are equivalent to this equation.

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



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Standard Form Equation

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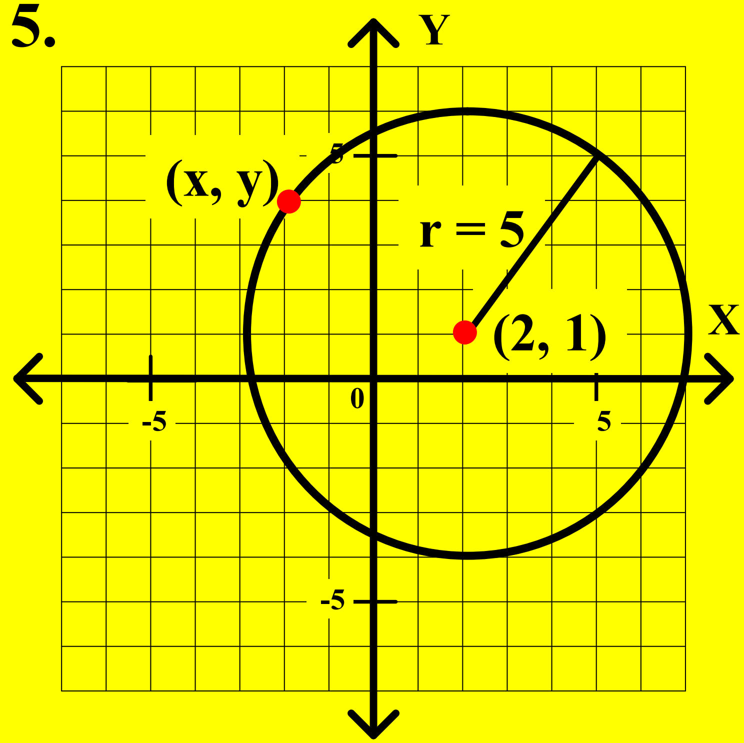
The following equations are equivalent to this equation.

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



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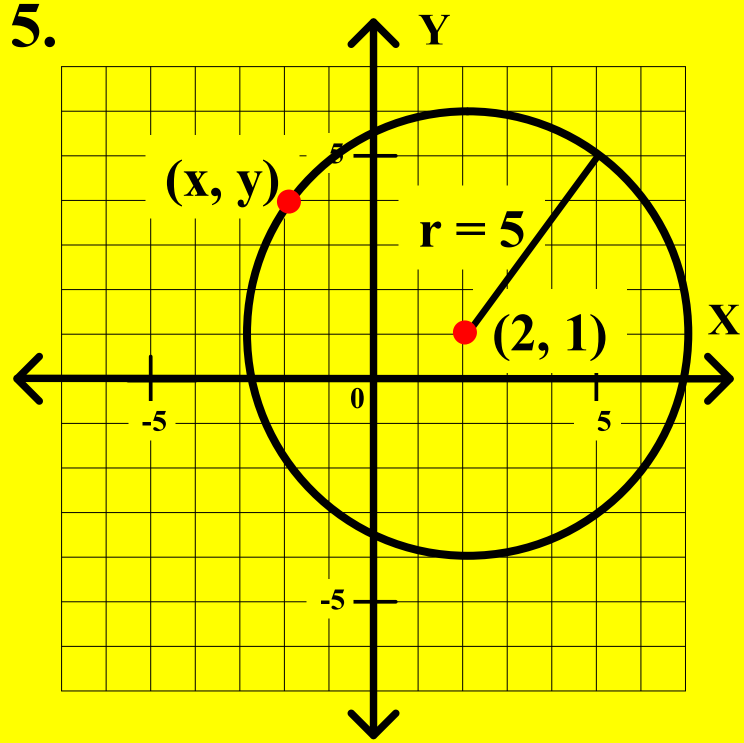
$$(x^2 - 4x + 4) + (y^2 - 2y + 1) =$$



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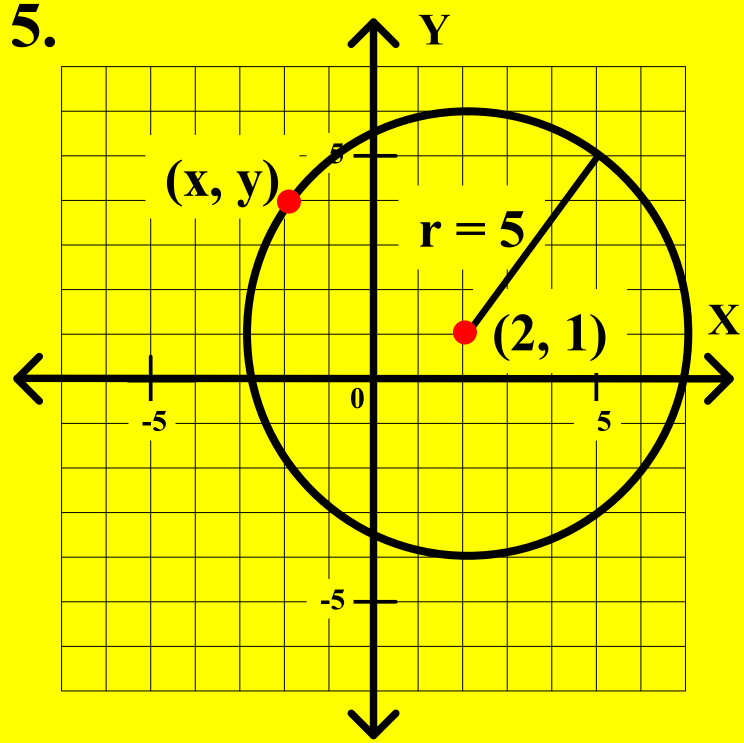

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Standard Form Equation of a Circle

Center: (h, k) Radius: r

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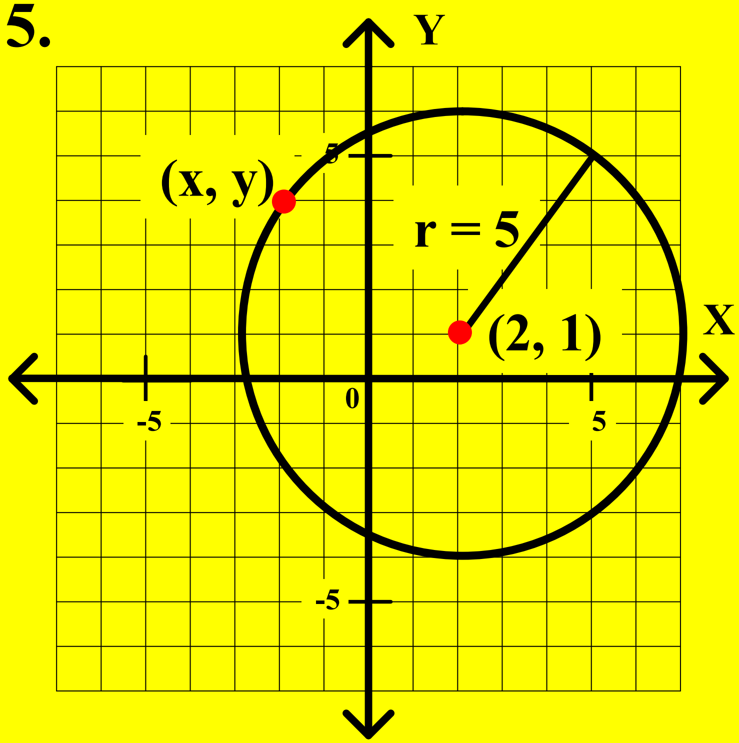
The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Standard Form Equation

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



The following equations are equivalent to this equation.

$$(x^2 - 4x + 4) + (y^2 - 2y + 1) = 25$$

$$x^2$$

Standard Form Equation of a Circle

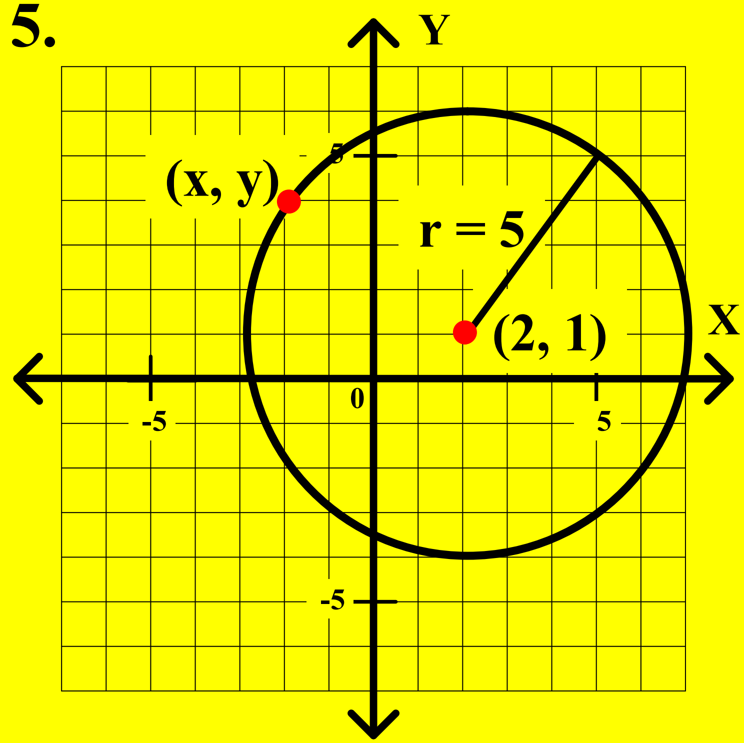
Center: (h, k) Radius: r

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

The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.



Standard Form Equation

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

The following equations are equivalent to this equation.

$$(x^2 - 4x + 4) + (y^2 - 2y + 1) = 25$$

$$x^2 + y^2$$

Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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

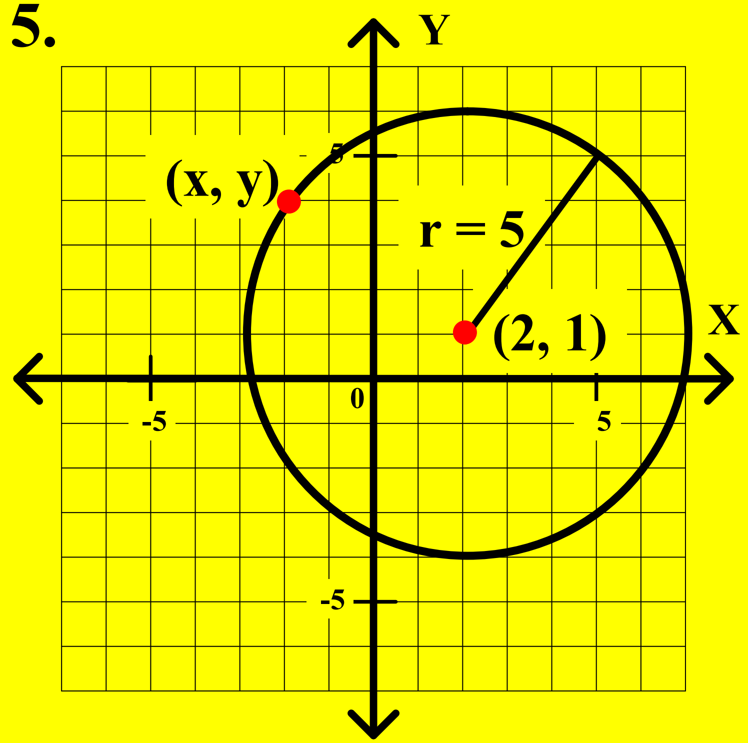
The Equation of a Circle

Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Standard Form Equation

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



The following equations are equivalent to this equation.

$$(x^2 - 4x + 4) + (y^2 - 2y + 1) = 25$$

$$x^2 + y^2 - 4x$$

Standard Form Equation of a Circle

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The Equation of a Circle

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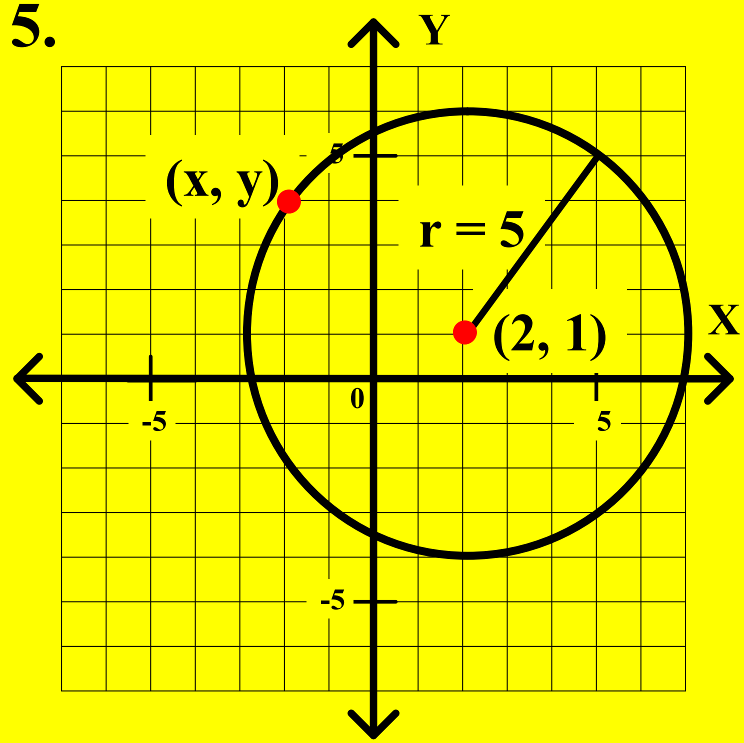

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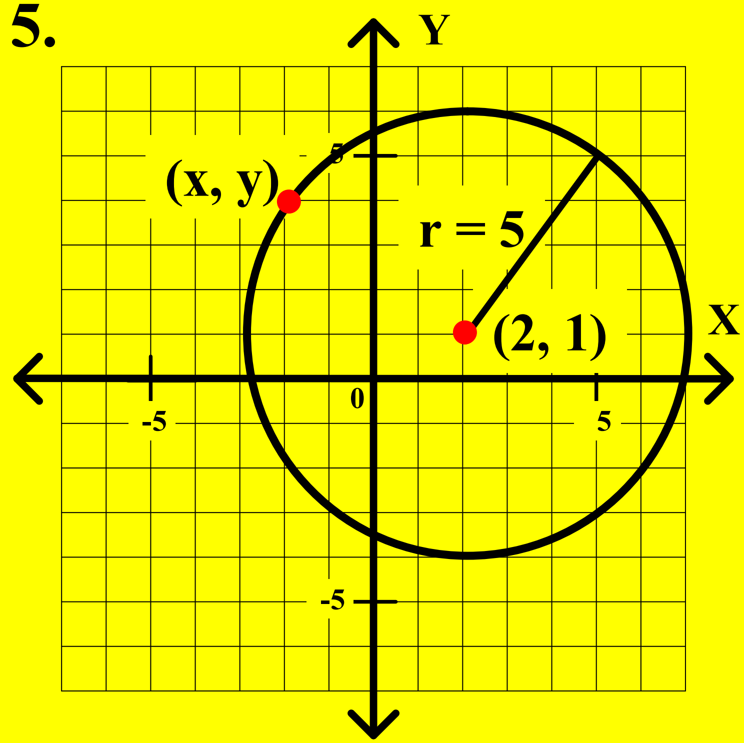

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Standard Form Equation of a Circle

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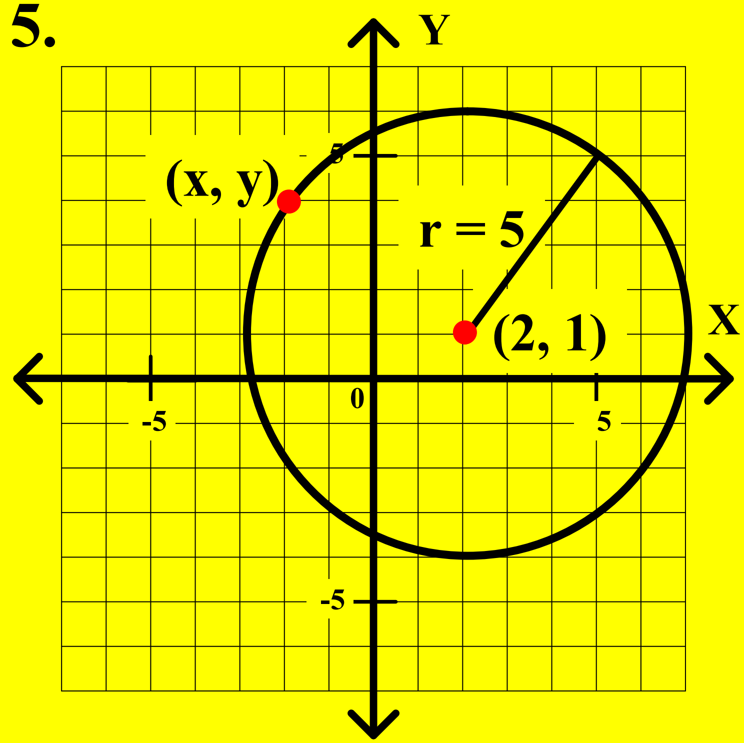

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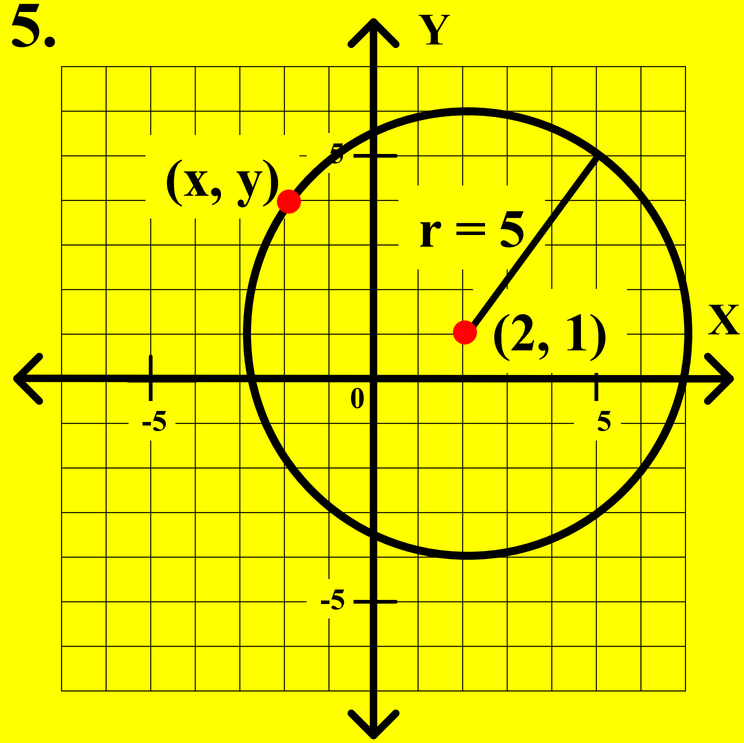

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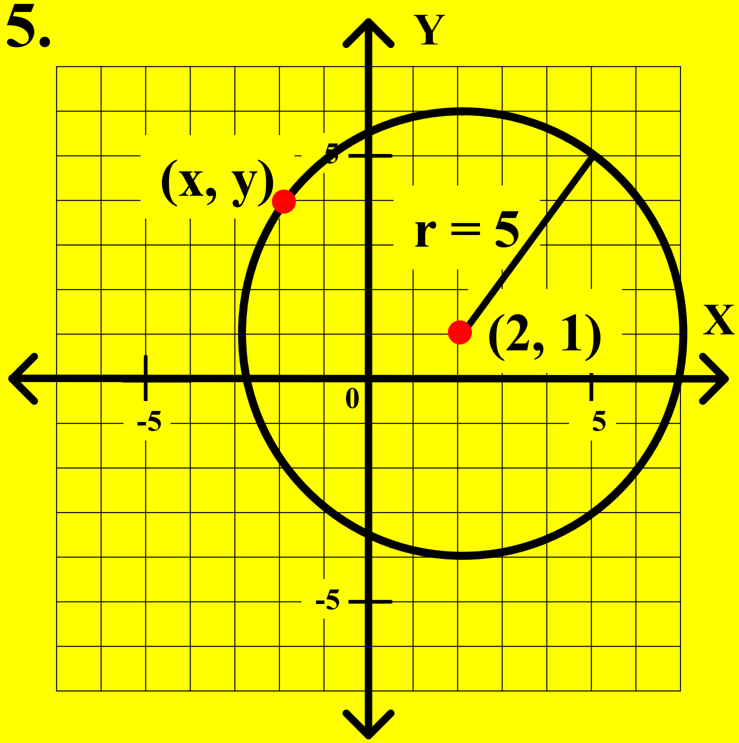

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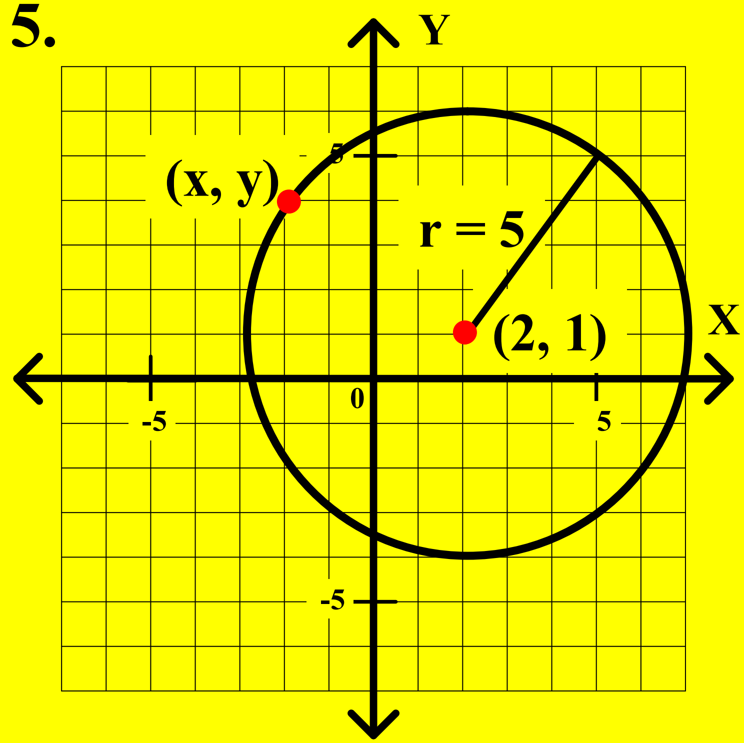

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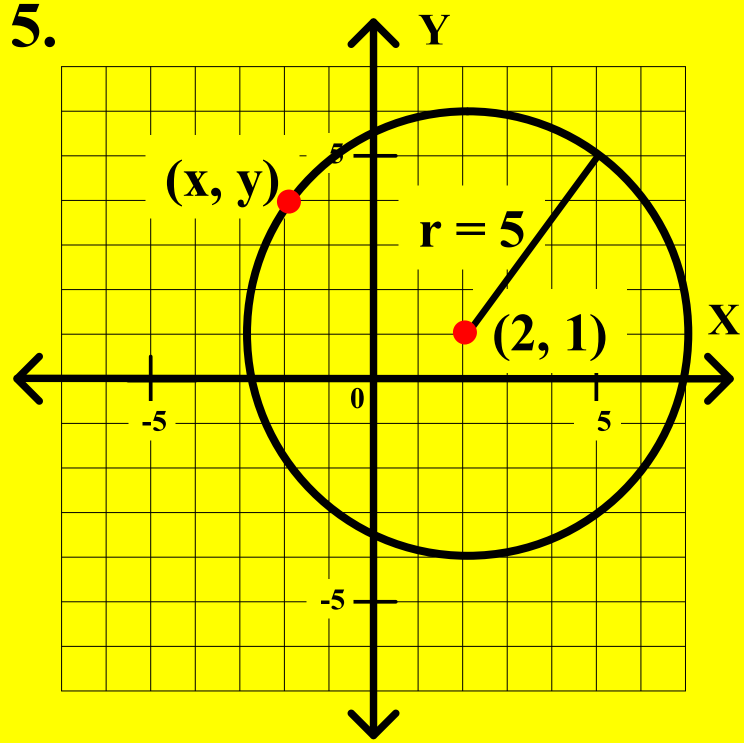

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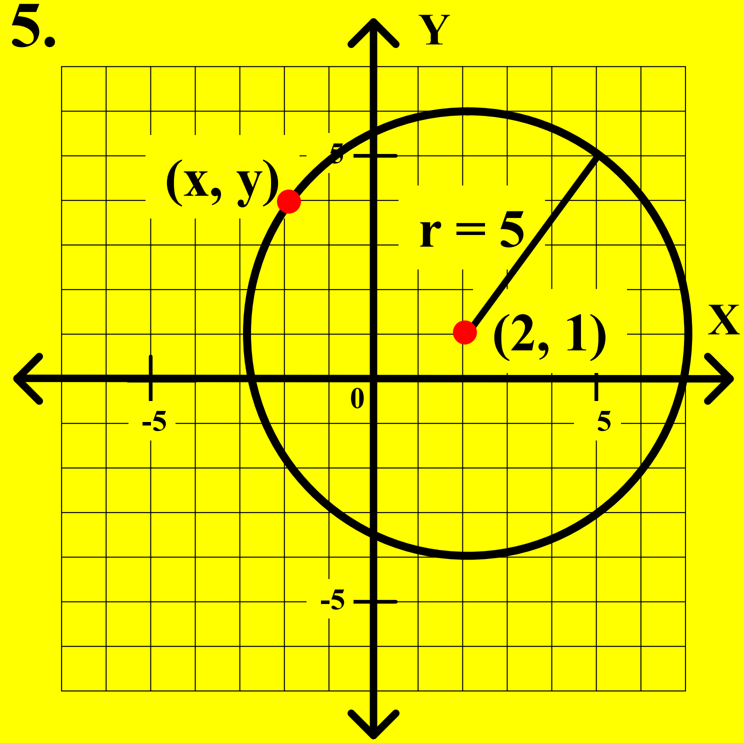

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$$x^2 + y^2 - 4x - 2y - 20$$

Standard Form Equation of a Circle

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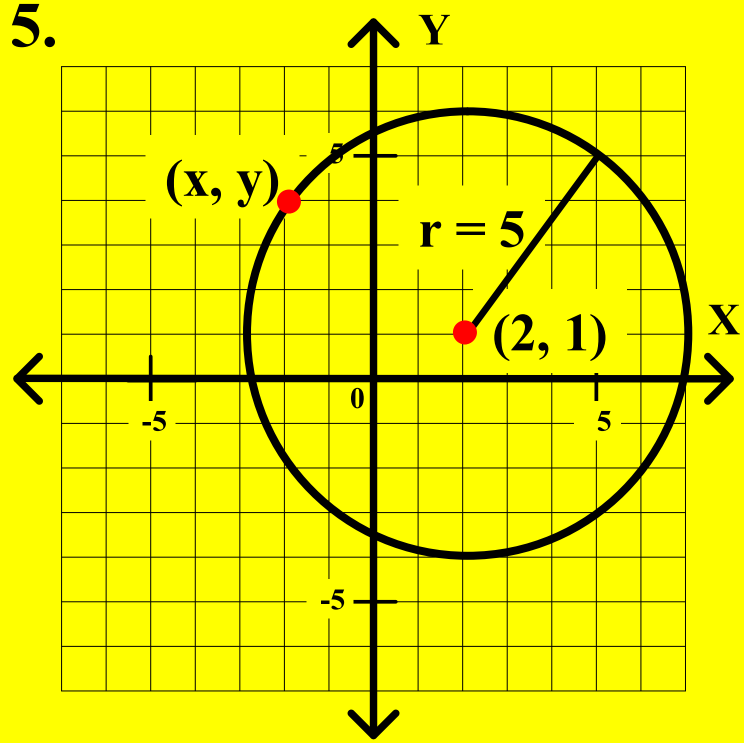

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$$x^2 + y^2 - 4x - 2y - 20 = 0$$

Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

The Equation of a Circle

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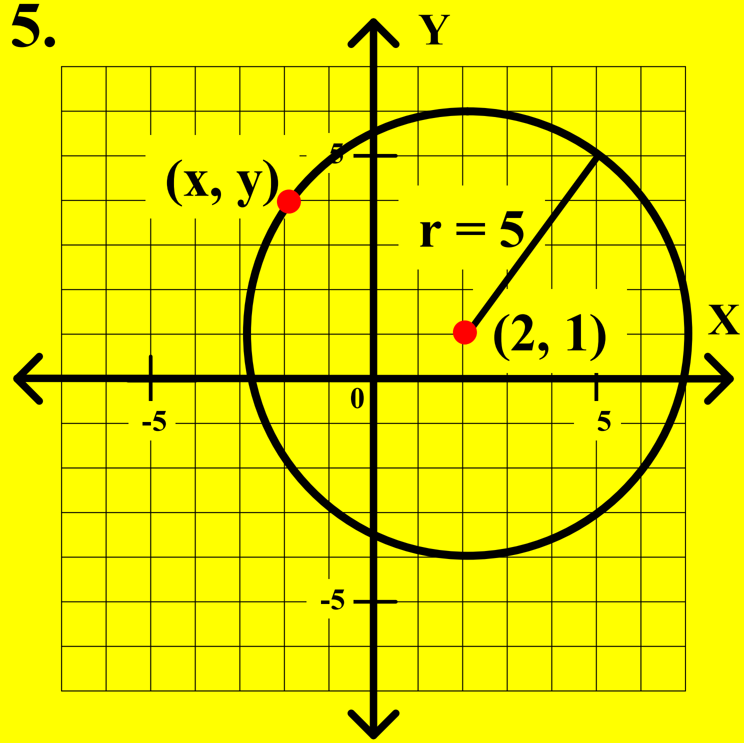

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$$x^2 + y^2 - 4x - 2y - 20 = 0$$

Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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

The Equation of a Circle

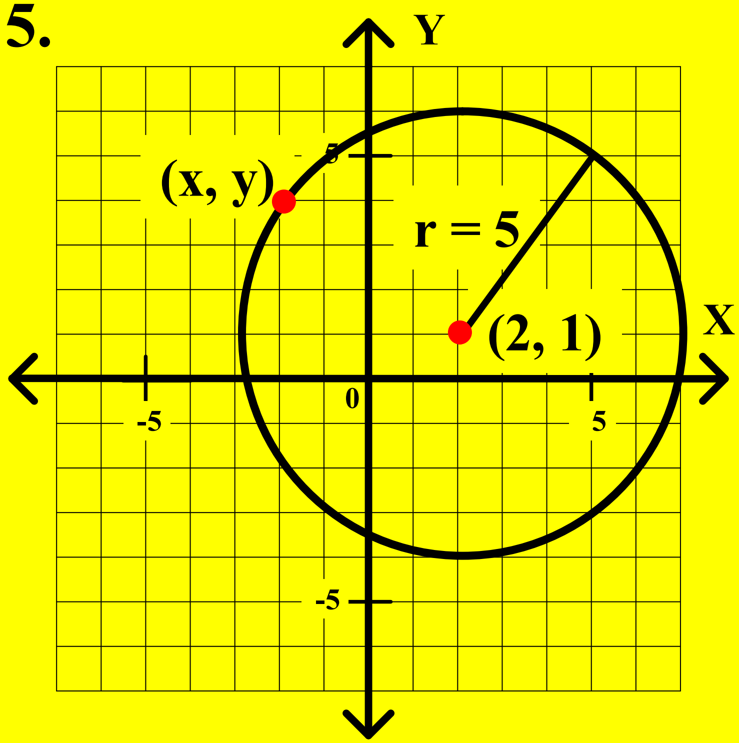
Consider the circle graphed here.

The center is (2, 1), and the radius is 5.

Standard Form Equation

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

$$x^2 + y^2 - 4x - 2y - 20 = 0$$



Standard Form Equation of a Circle

Center: (h, k)   Radius: r

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

The Equation of a Circle

Consider the circle graphed here.

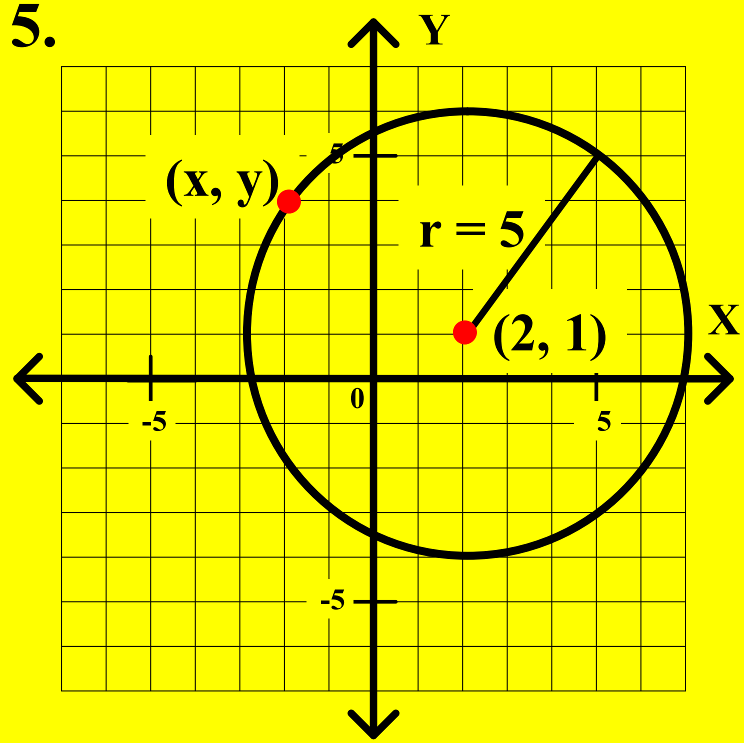
The center is (2, 1), and the radius is 5.

Standard Form Equation

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

$$x^2 + y^2 - 4x - 2y - 20 = 0$$

This equation is the general form equation of this circle.



Standard Form Equation of a Circle

Center: (h, k) Radius: r

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The Equation of a Circle

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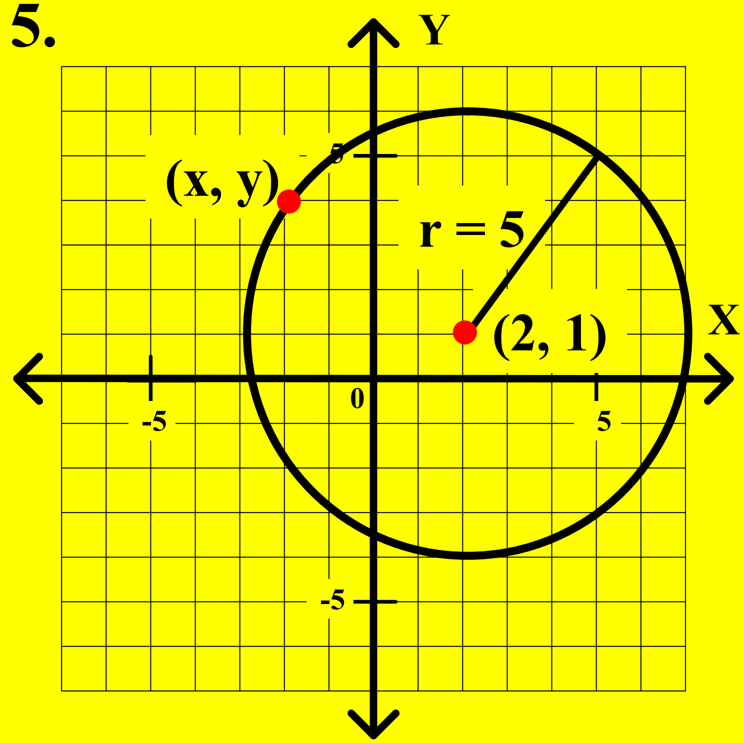

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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General Form Equation of a Circle

The Equation of a Circle

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Standard Form Equation

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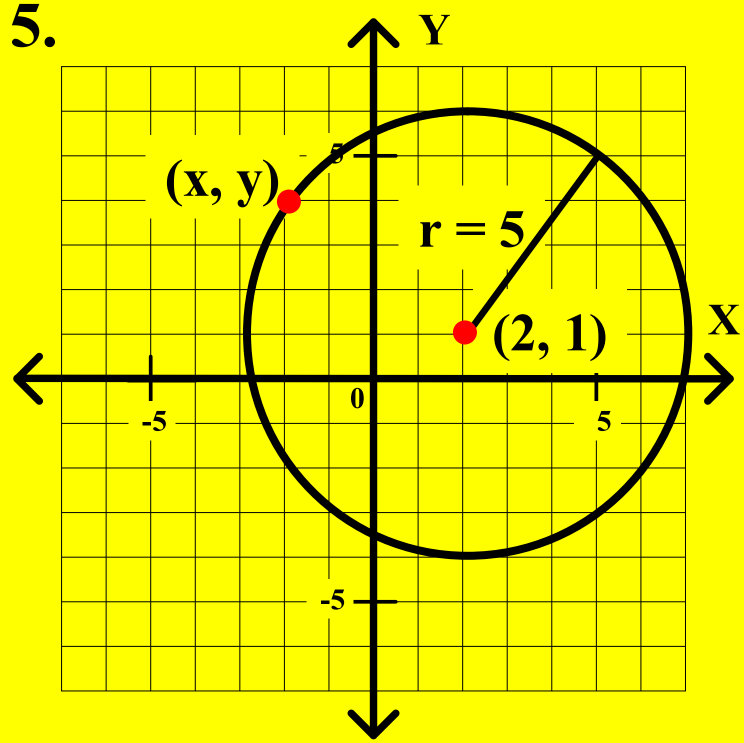


Standard Form Equation of a Circle
Center: (h, k)   Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

General Form Equation of a Circle

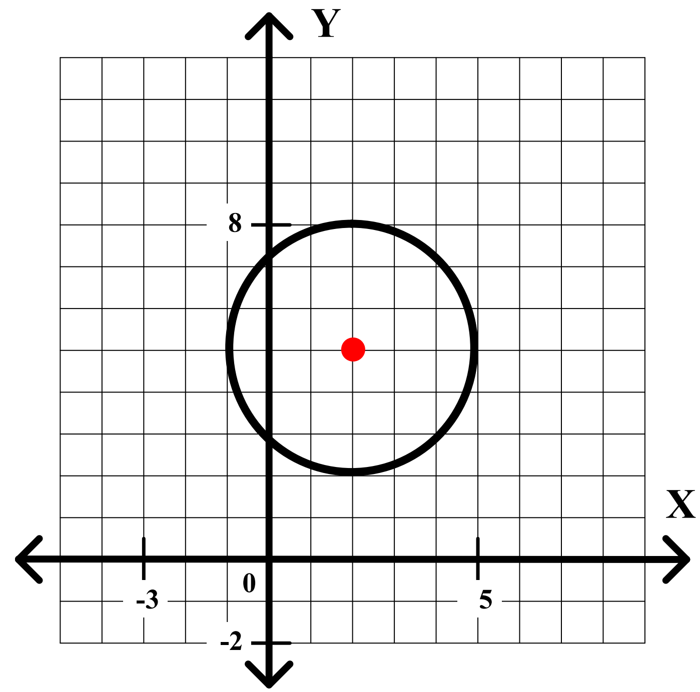
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

4. (a) ______________________________

   (b) ______________________________



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

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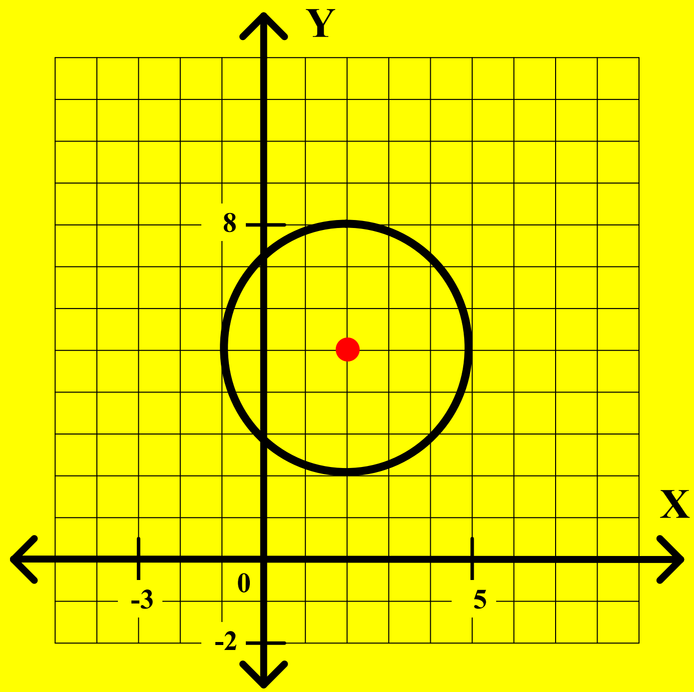

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General Form Equation of a Circle

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Algebra 2   Class Worksheet #1 Unit 7

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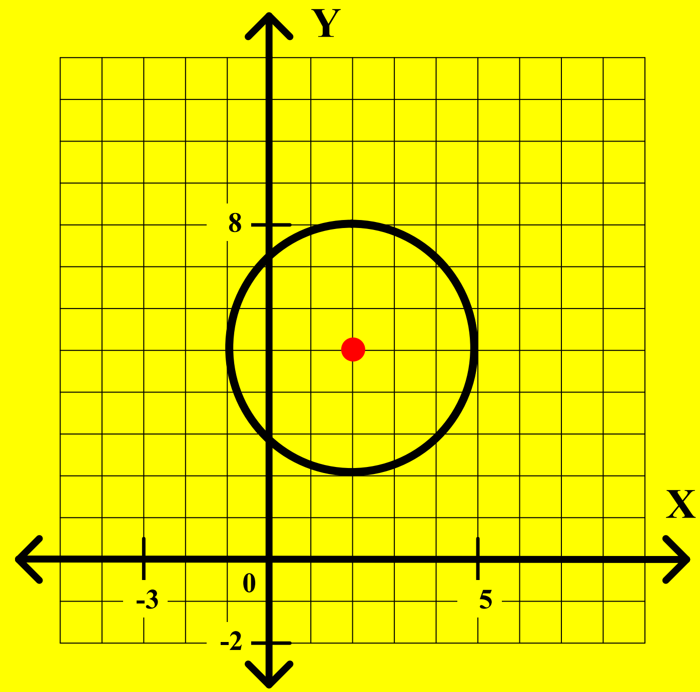
Center:



Standard Form Equation of a Circle
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General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

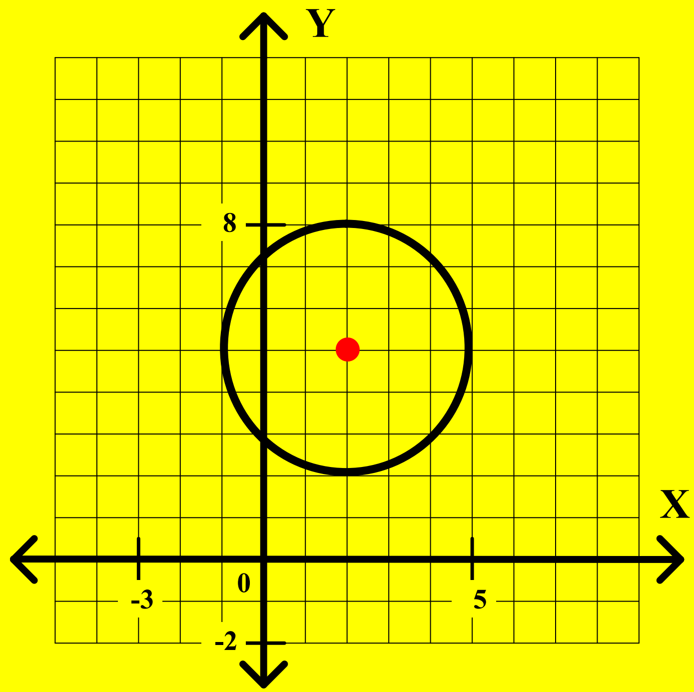
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

4. (a) ____________________________

(b) ____________________________

Center: (2,



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

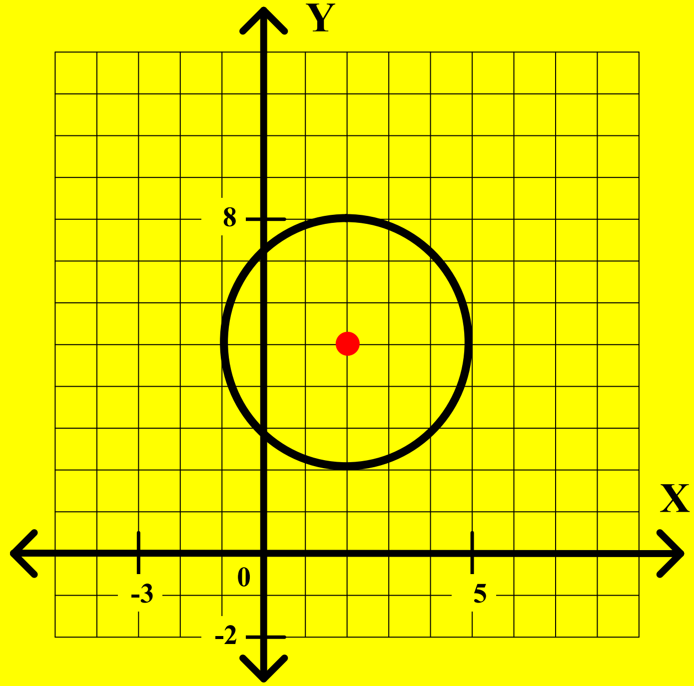
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

4. (a) ____________________________

(b) ____________________________

Center: (2, 5)



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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General Form Equation of a Circle

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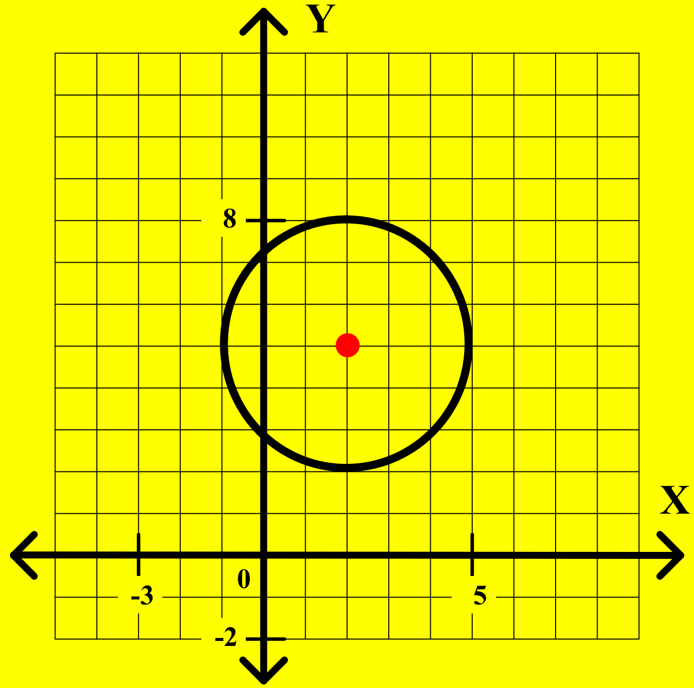
Center: (2, 5) Radius:



Standard Form Equation of a Circle

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General Form Equation of a Circle

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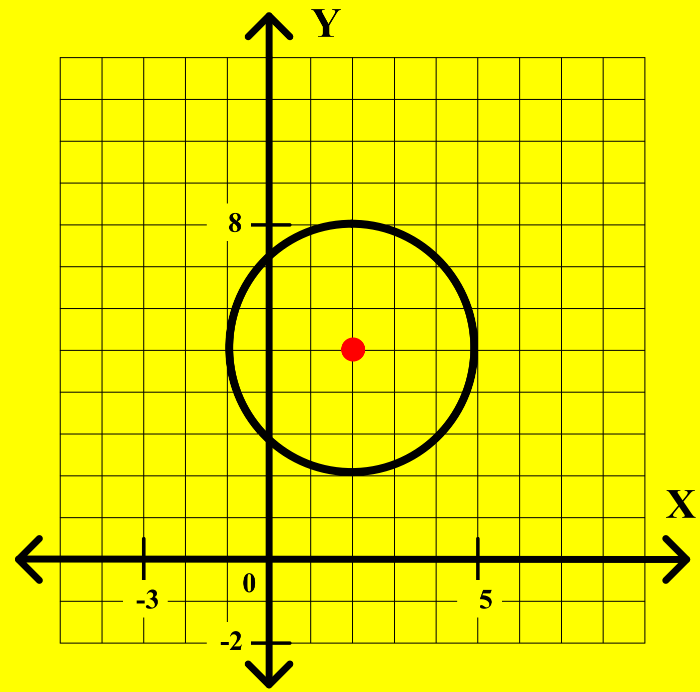
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

4. (a) ______________________________

(b) ______________________________

Center: (2, 5) Radius: 3



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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General Form Equation of a Circle

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Algebra 2 Class Worksheet #1 Unit 7

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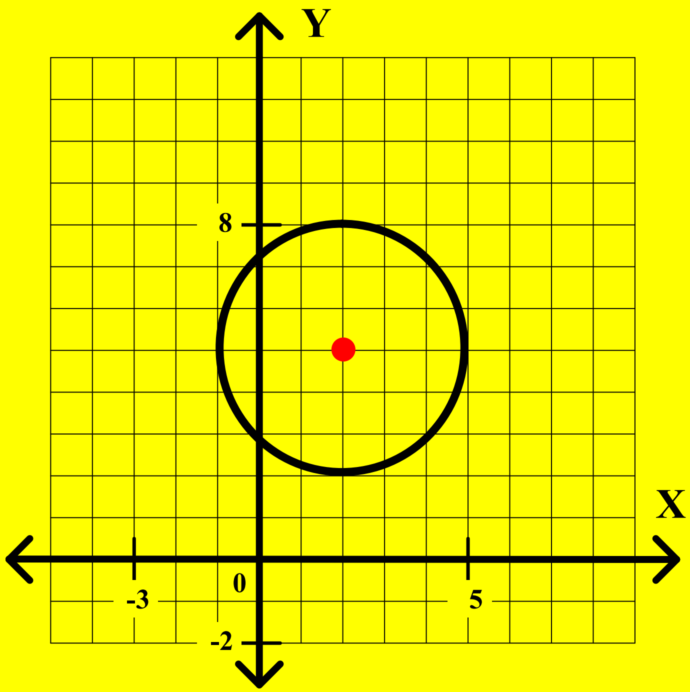
4. (a) ____________________________

(b) ____________________________

Center: (2, 5) Radius: 3

h =



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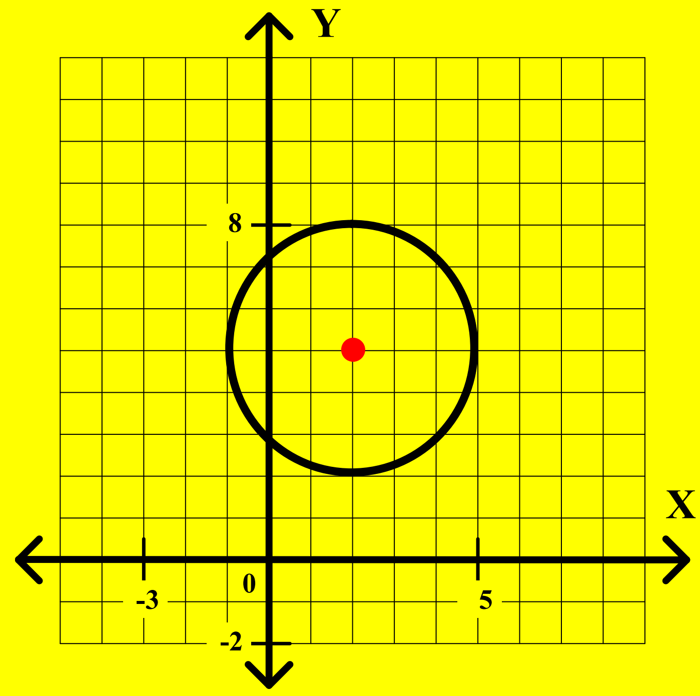
$h = 2$



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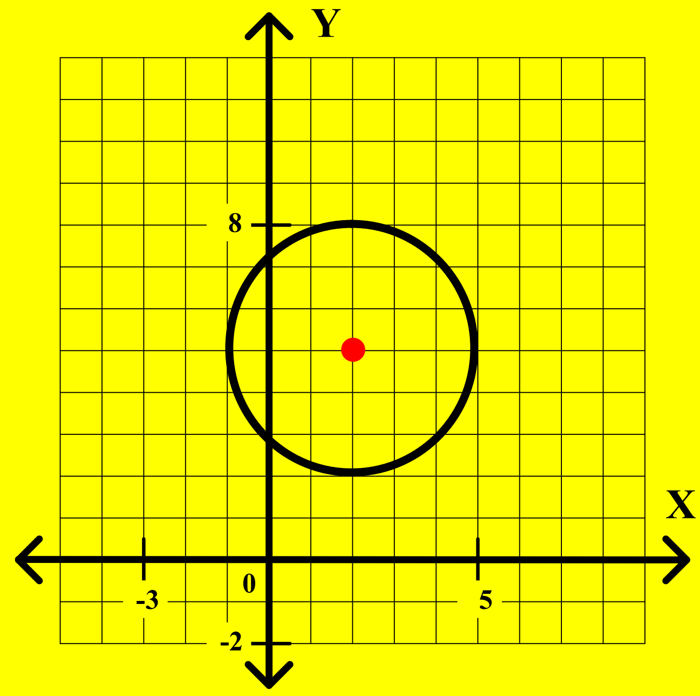

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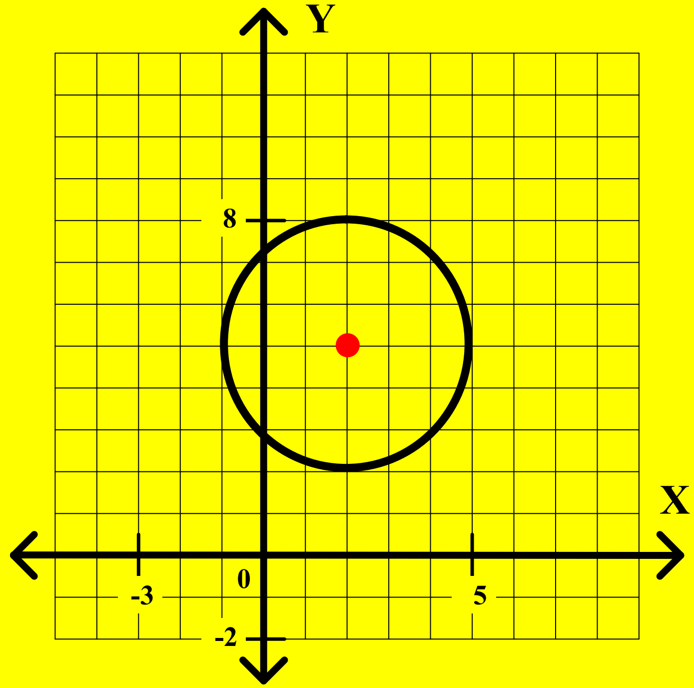

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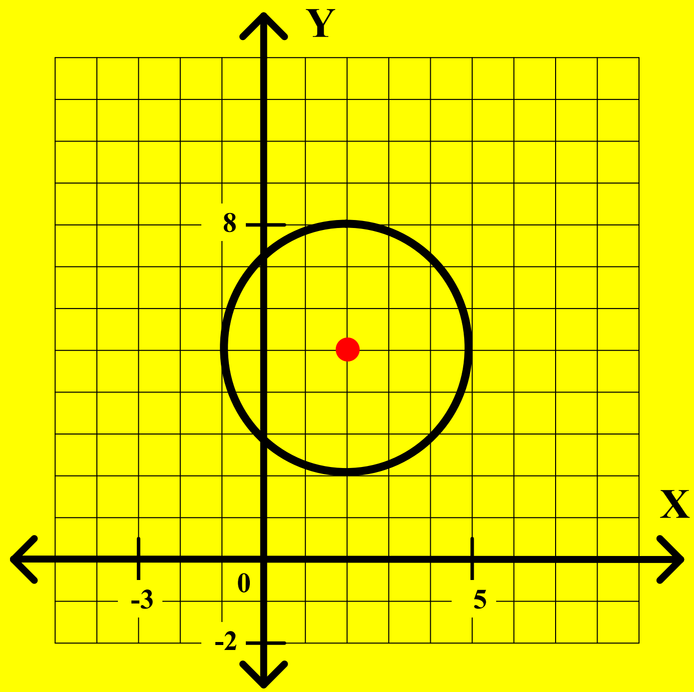

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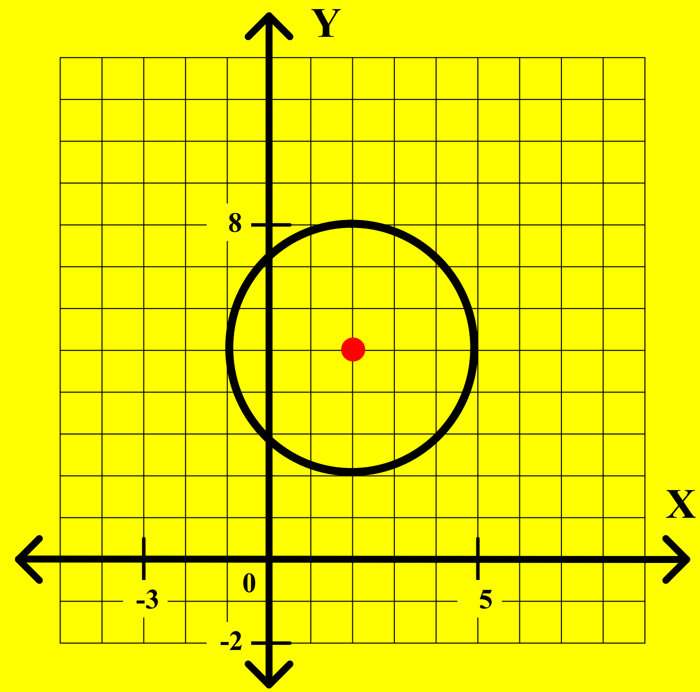

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(b) ____________________

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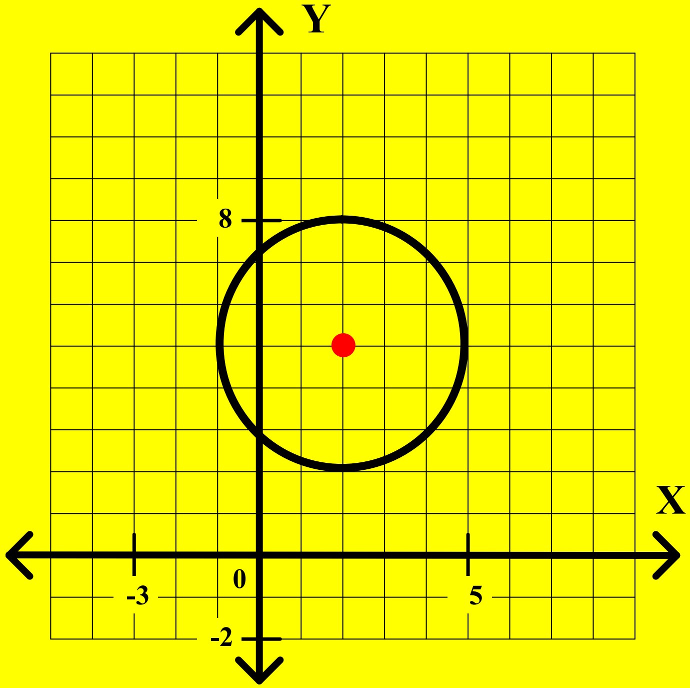
$h = 2 ; k = 5 ; r = 3$

$(x - 2)^2$



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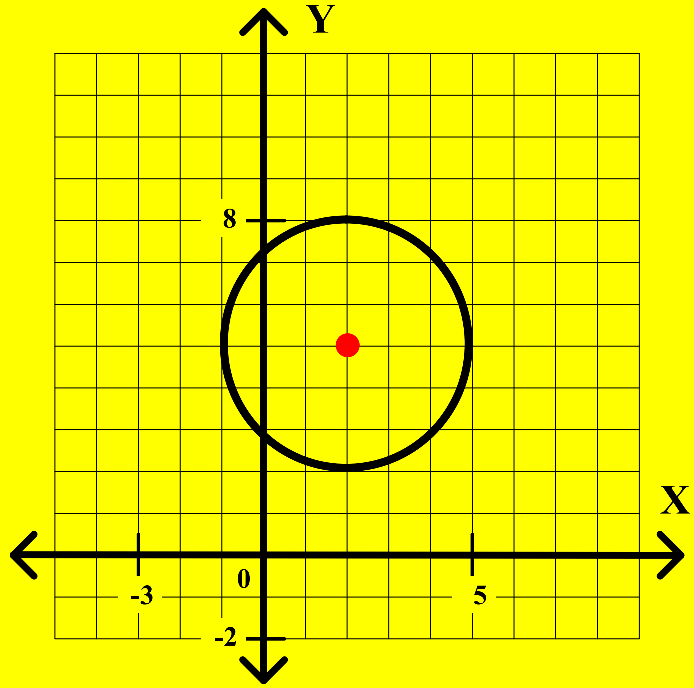
$(x - 2)^2 +$



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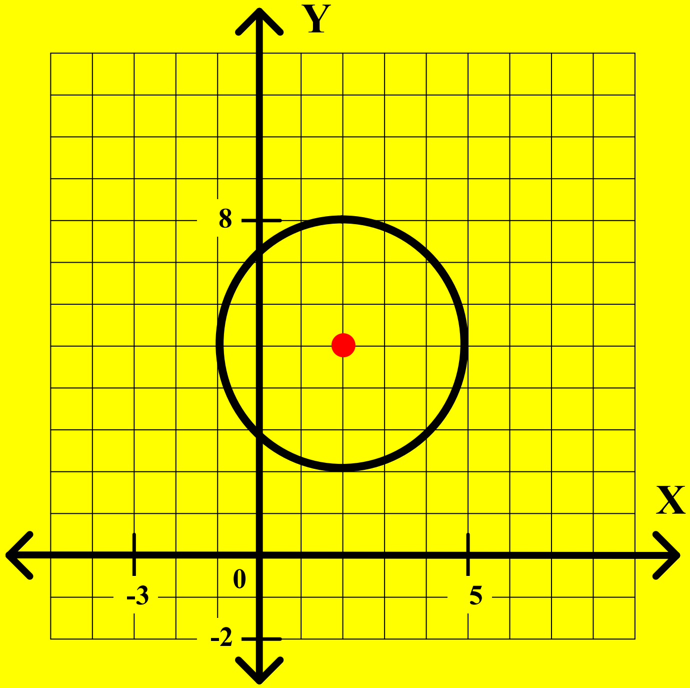
$(x - 2)^2 + (y - 5)^2$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

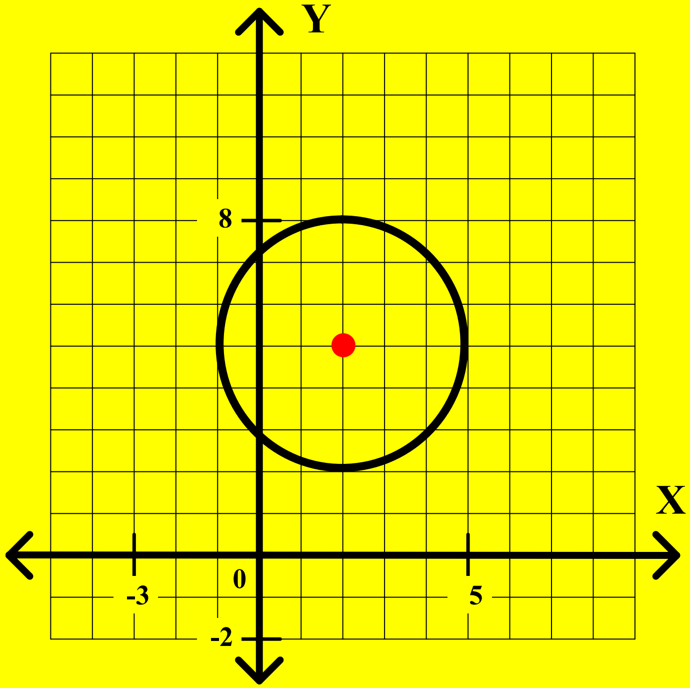
4. (a) ______________________________

(b) ______________________________

Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

$(x - 2)^2 + (y - 5)^2 =$



Standard Form Equation of a Circle

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Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

4. (a) ____________________________

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Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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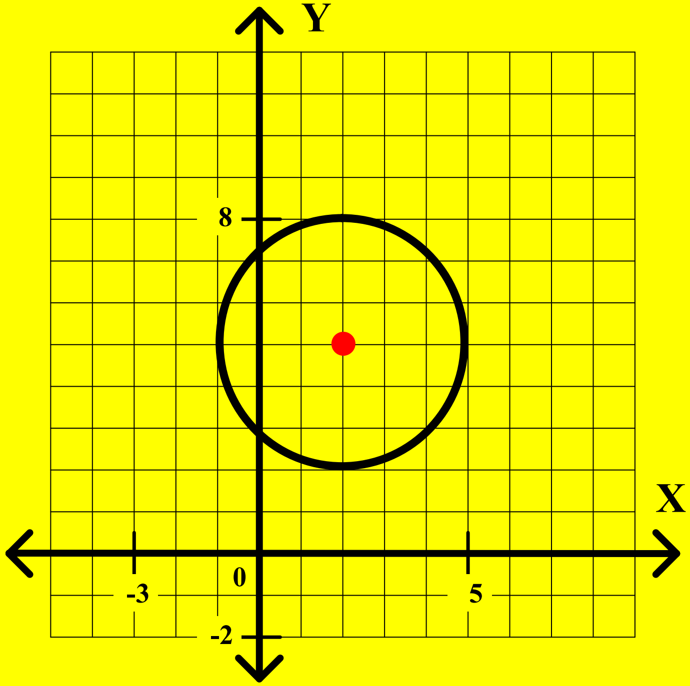


Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

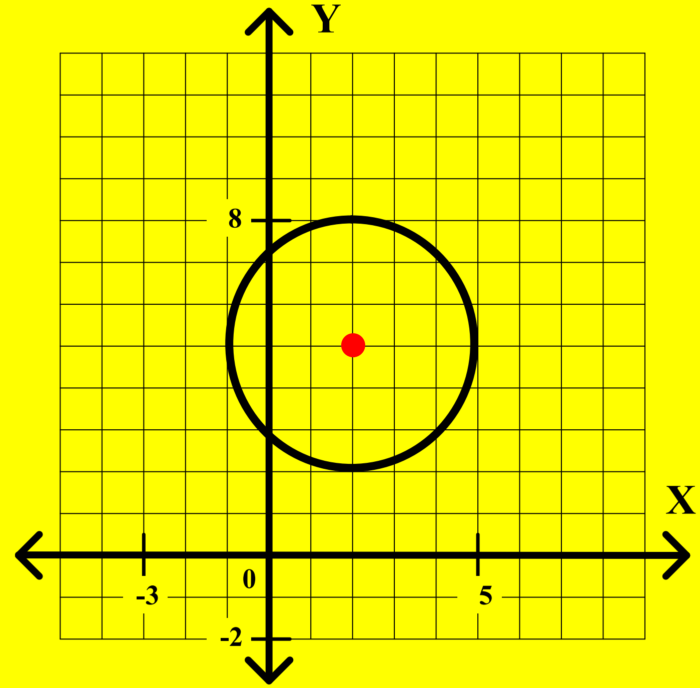
4. (a) $(x-2)^2$ ____________________

(b) ____________________

Center: (2, 5) Radius: 3

$h = 2 \; ; \; k = 5 \; ; \; r = 3$

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



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

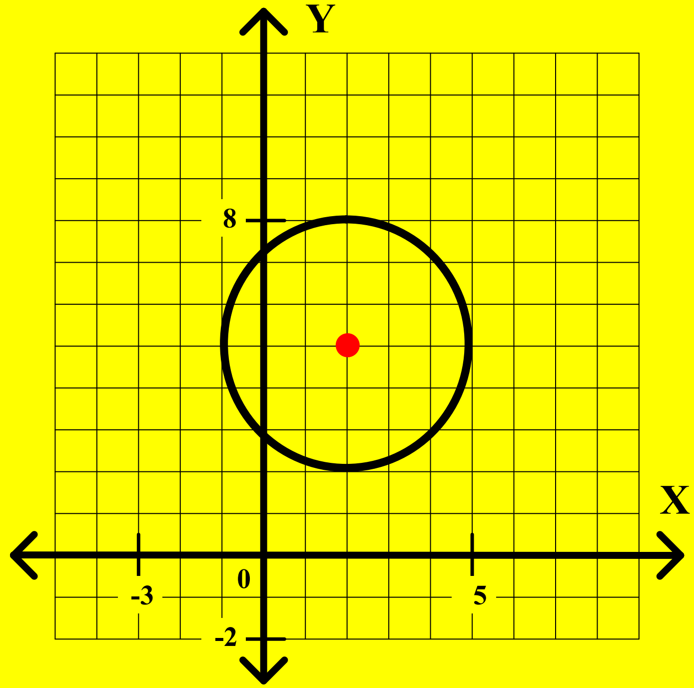
4. (a) $(x - 2)^2 +$ ____________________

(b) ____________________

Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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



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Algebra 2 Class Worksheet #1 Unit 7

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4. (a) $(x-2)^2 + (y-5)^2$ ____________

(b) ____________

Center: (2, 5) Radius: 3

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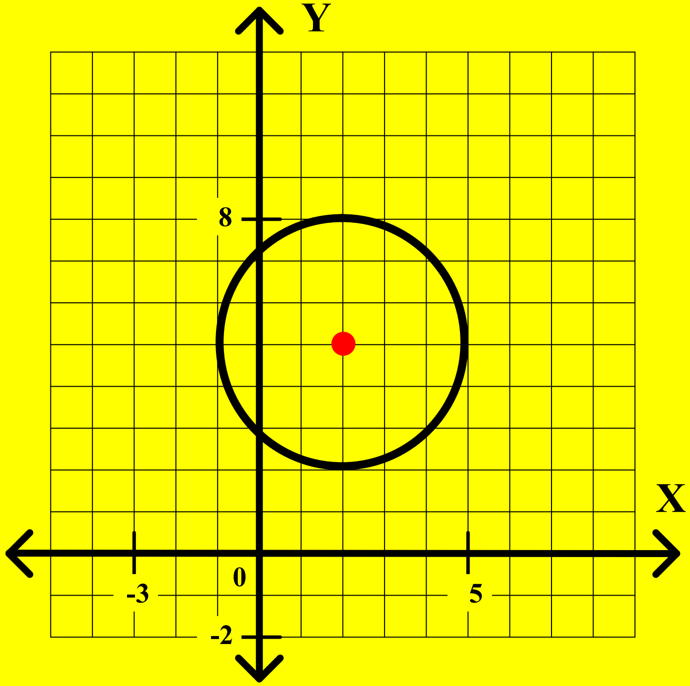

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Algebra 2 Class Worksheet #1 Unit 7

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4. (a) $(x-2)^2 + (y-5)^2 =$ ________

(b) ________________

Center: (2, 5) Radius: 3

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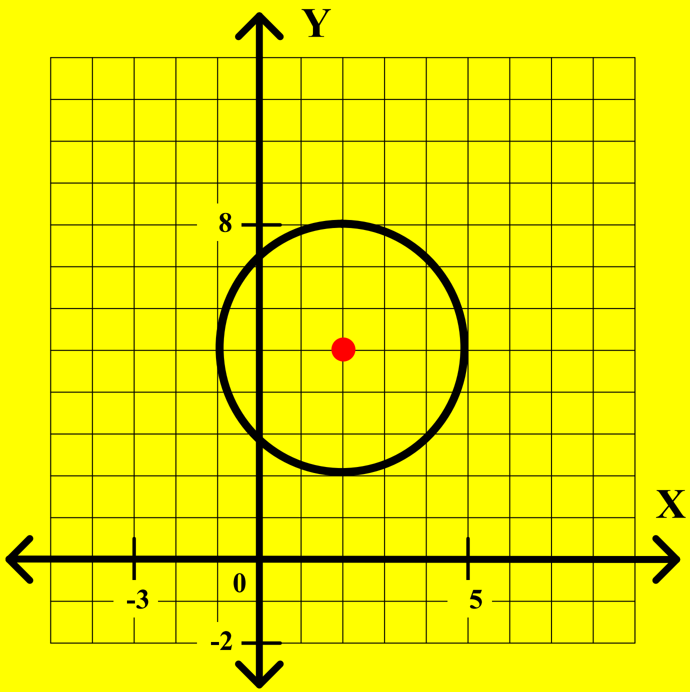


Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

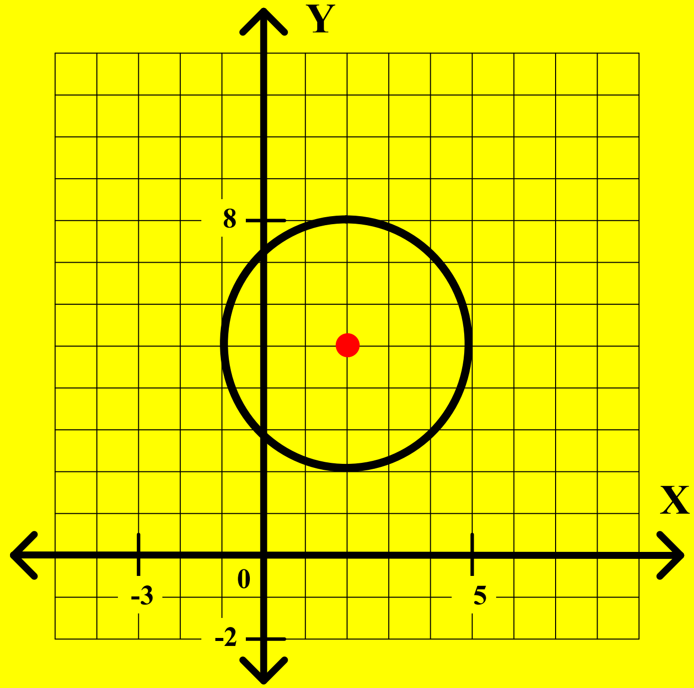
4. (a) $(x - 2)^2 + (y - 5)^2 = 9$

(b) ______________________

Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

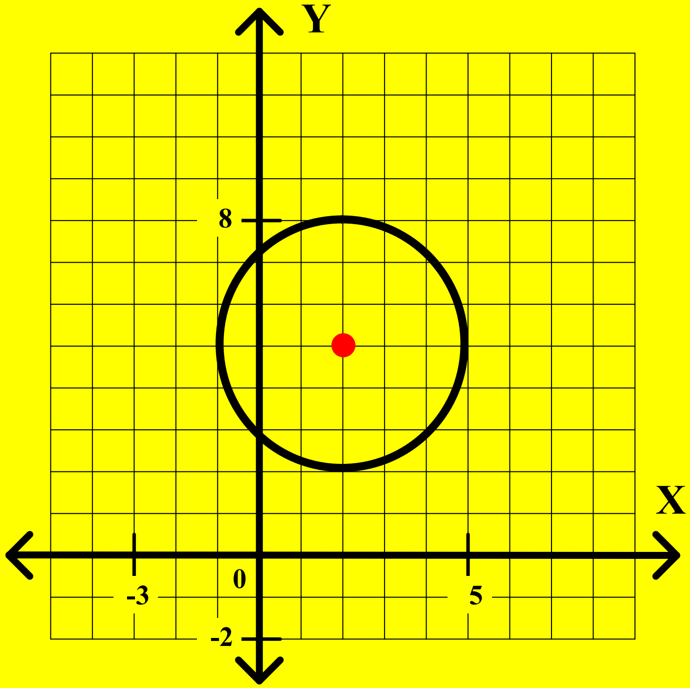
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) ______________________



Center: (2, 5) Radius: 3

$h = 2 ;\ k = 5 ;\ r = 3$

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

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

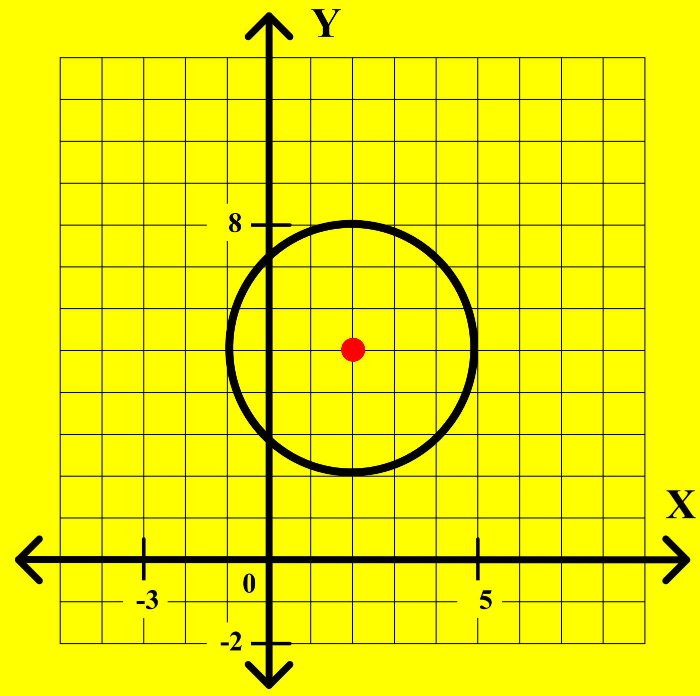
$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) ____________________



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

x^2

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

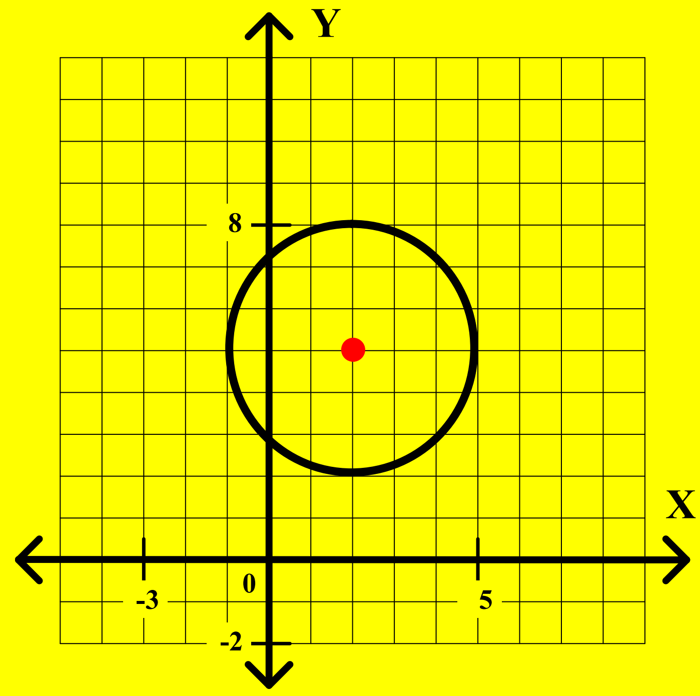
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) ____________________



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

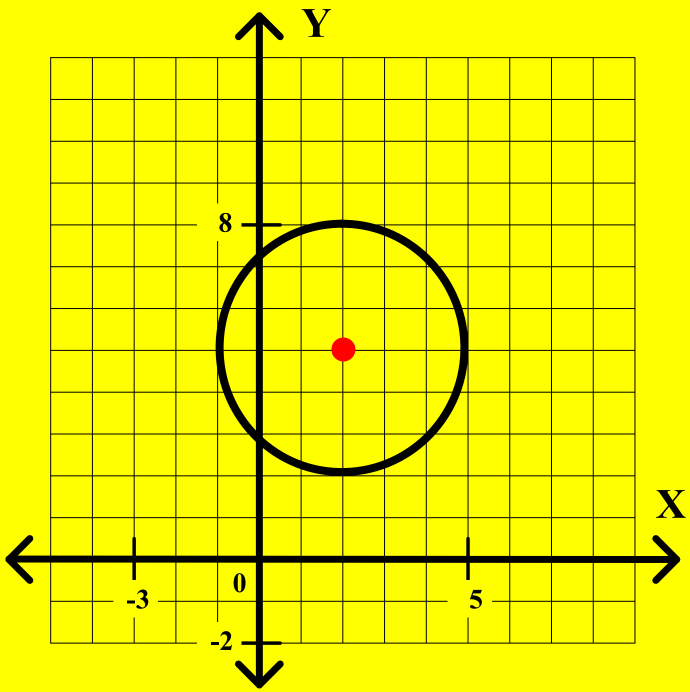
(b) ______________________________

Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x + 4$



Standard Form Equation of a Circle
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$$(x-h)^2 + (y-k)^2 = r^2$$

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

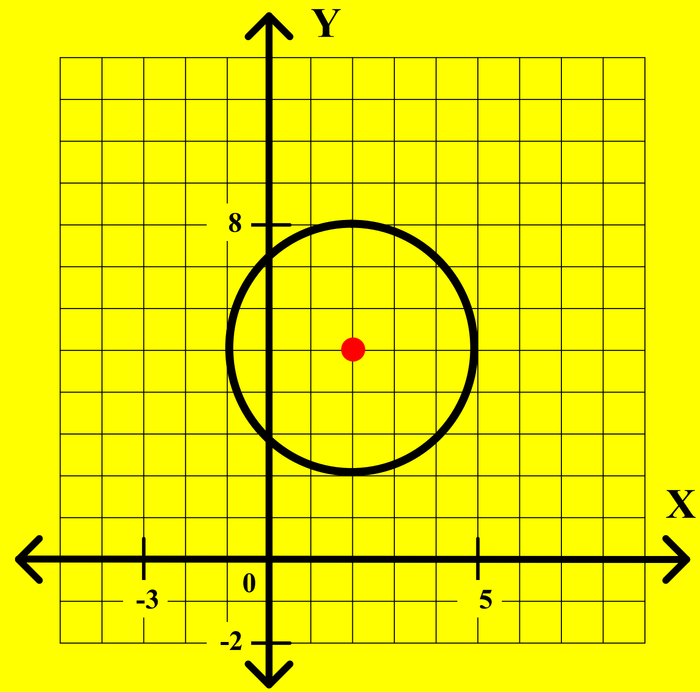
(b) ______________________

Center: (2, 5) Radius: 3

$h = 2 \ ; \ k = 5 \ ; \ r = 3$

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

$x^2 - 4x + 4 +$



Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

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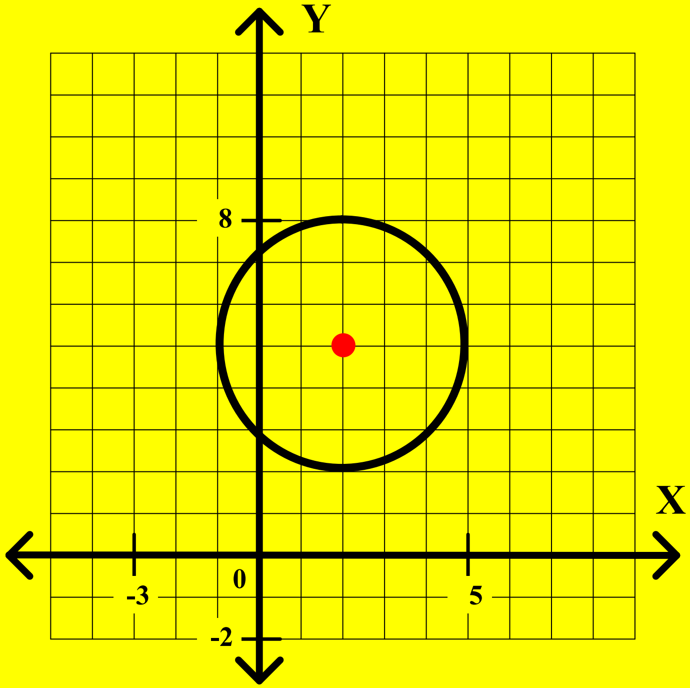
Center: (2, 5) Radius: 3

$h = 2 \; ; \; k = 5 \; ; \; r = 3$

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

$x^2 - 4x + 4 +$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

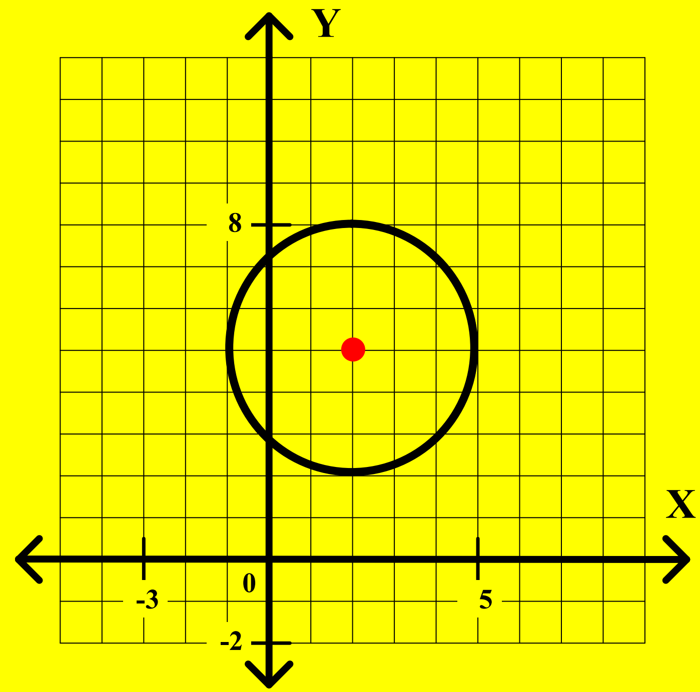
(b) ____________________

Center: (2, 5) Radius: 3

$h = 2 \; ; \; k = 5 \; ; \; r = 3$

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

$x^2 - 4x + 4 + y^2$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

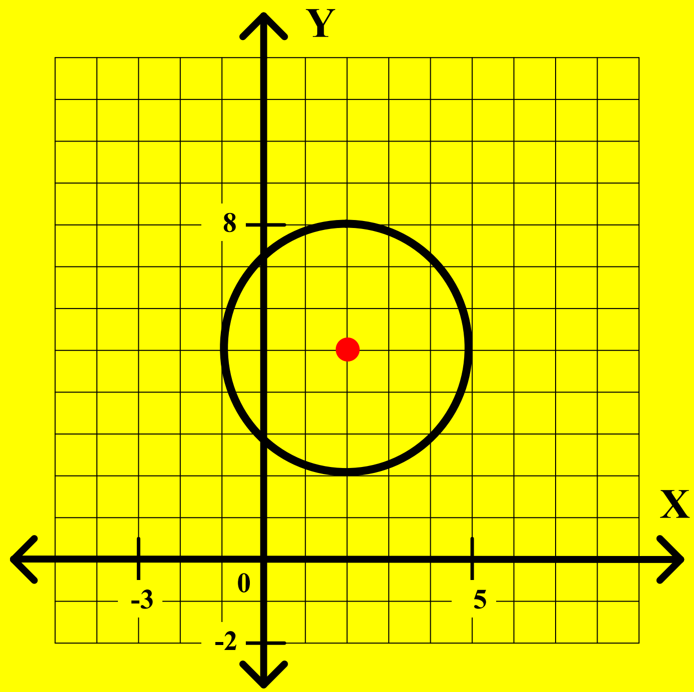
(b) ______________________

Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

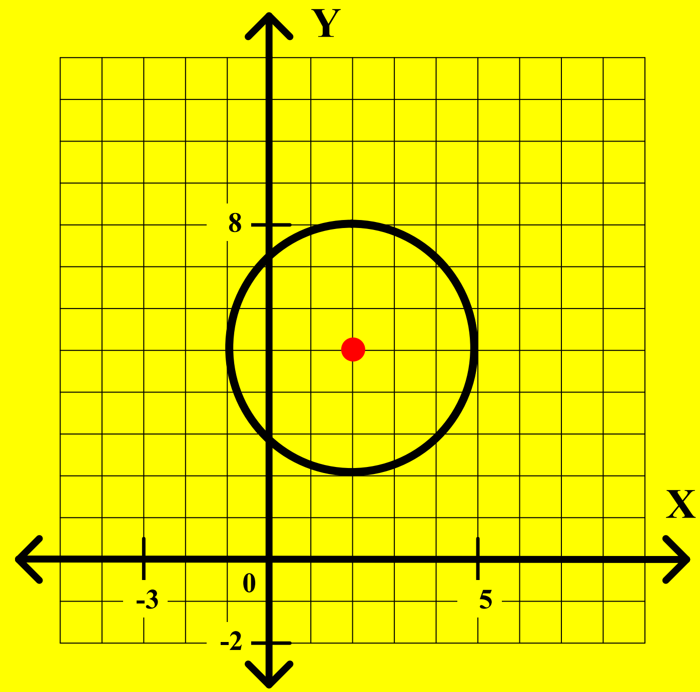
(b) ______________________

Center: (2, 5) Radius: 3

$h = 2\ ;\ k = 5\ ;\ r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25$



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General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

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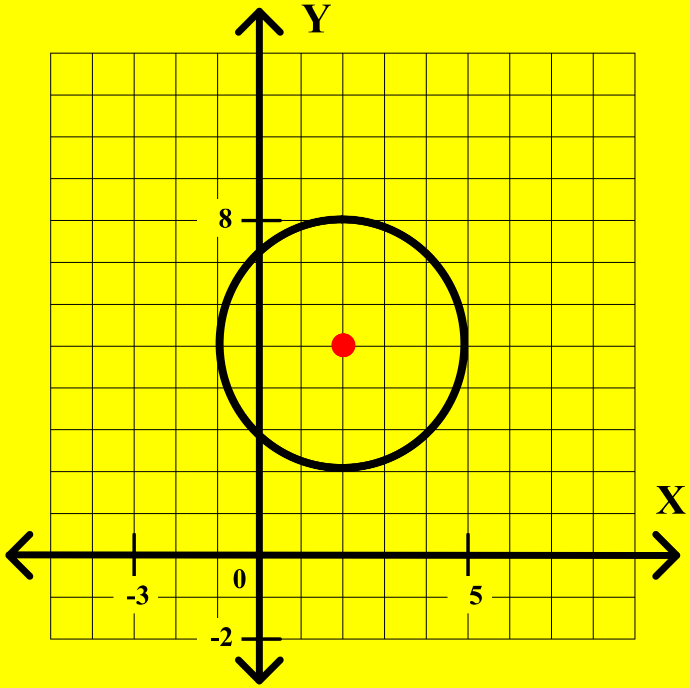
4. (a) $(x - 2)^2 + (y - 5)^2 = 9$

(b) ______________________



Center: (2, 5) Radius: 3

$h = 2 \; ; \; k = 5 \; ; \; r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 =$

Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

General Form Equation of a Circle

$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

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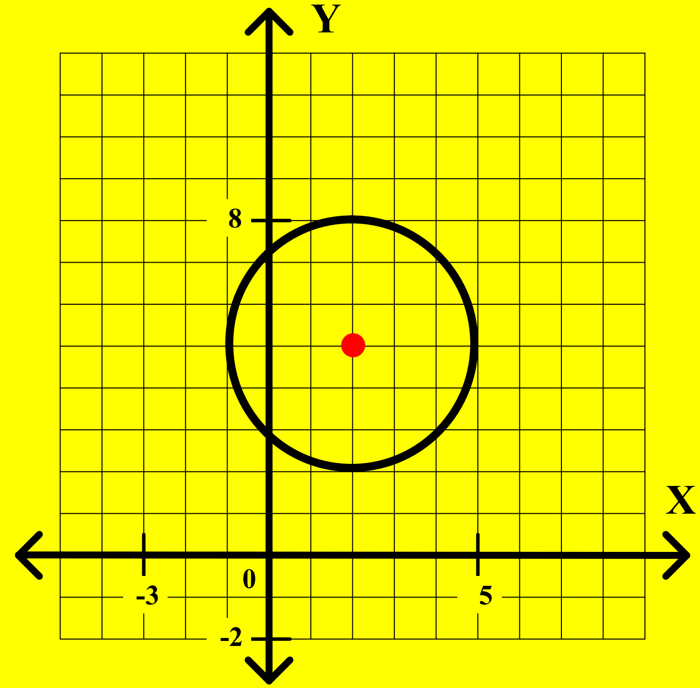
4. (a) $(x-2)^2 + (y-5)^2 = 9$

(b) ______________________



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) ______________________

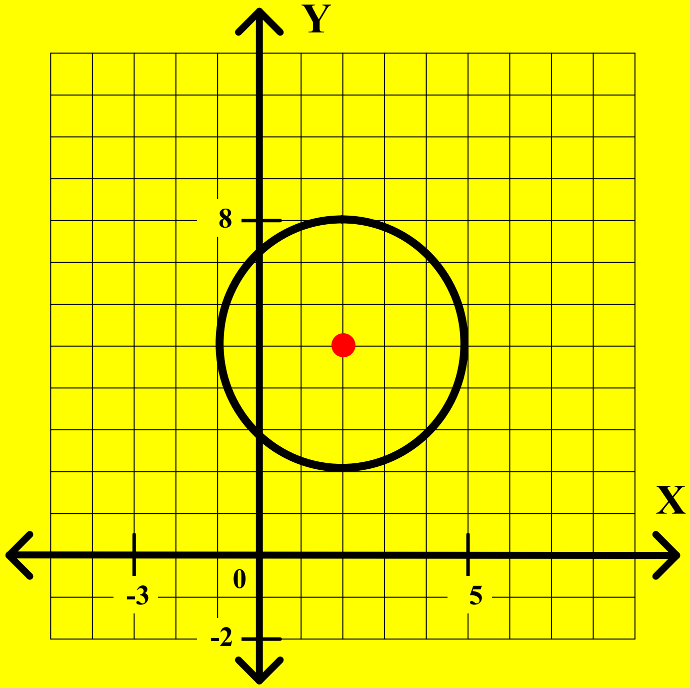
Center: (2, 5) Radius: 3

$h = 2\ ;\ k = 5\ ;\ r = 3$

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

$x^2-4x+4+y^2-10y+25=9$

x^2



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General Form Equation of a Circle

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For each of the following circles, write its equation (a) in standard form and (b) in general form.

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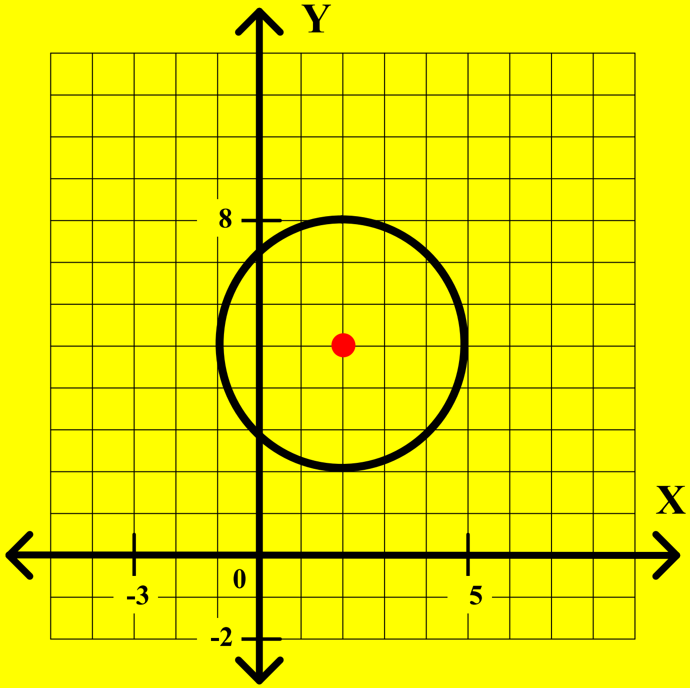

Center: (2, 5) Radius: 3

$h = 2 \; ; \; k = 5 \; ; \; r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

$x^2 + y^2$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

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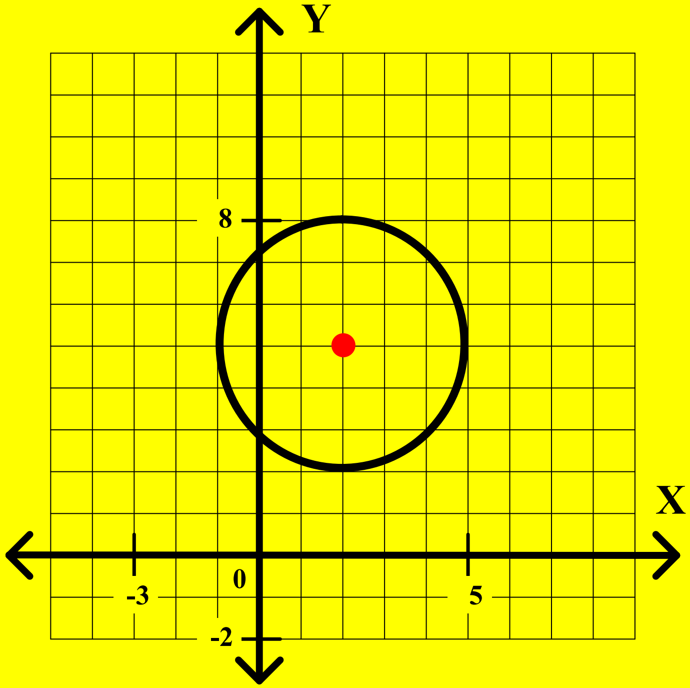
(b) ______________________



Center: (2, 5) Radius: 3

$h = 2 \;;\; k = 5 \;;\; r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

$x^2 + y^2 - 4x$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

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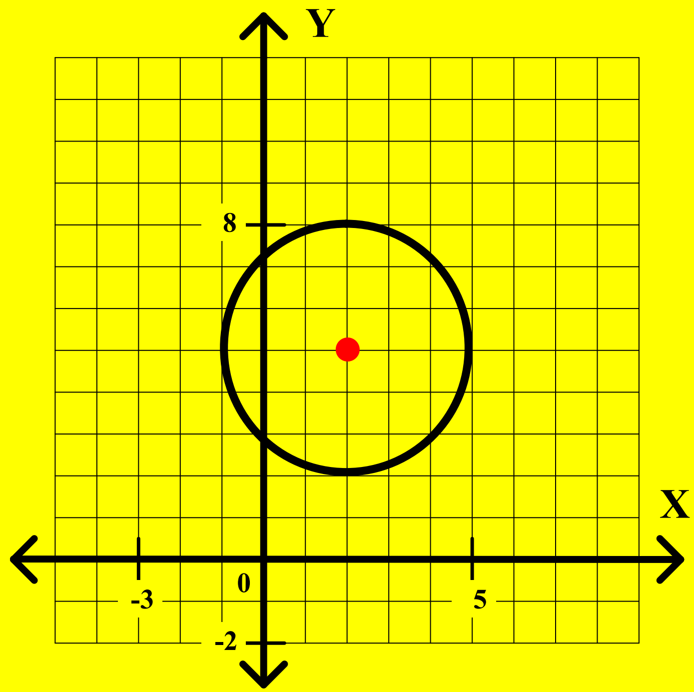
(b) ______________________



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

$x^2 + y^2 - 4x - 10y$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

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

(b) ______________________

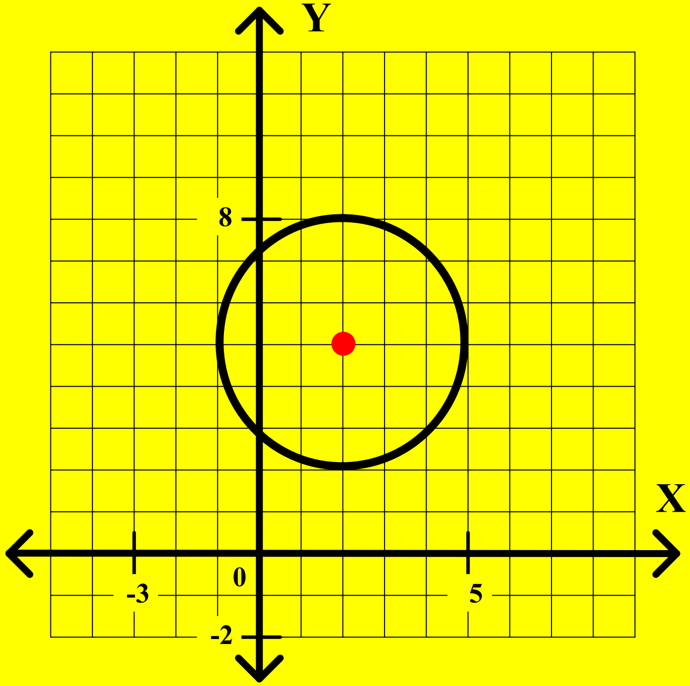
Center: (2, 5) Radius: 3

$h = 2 \;;\; k = 5 \;;\; r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

$x^2 + y^2 - 4x - 10y + 29$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

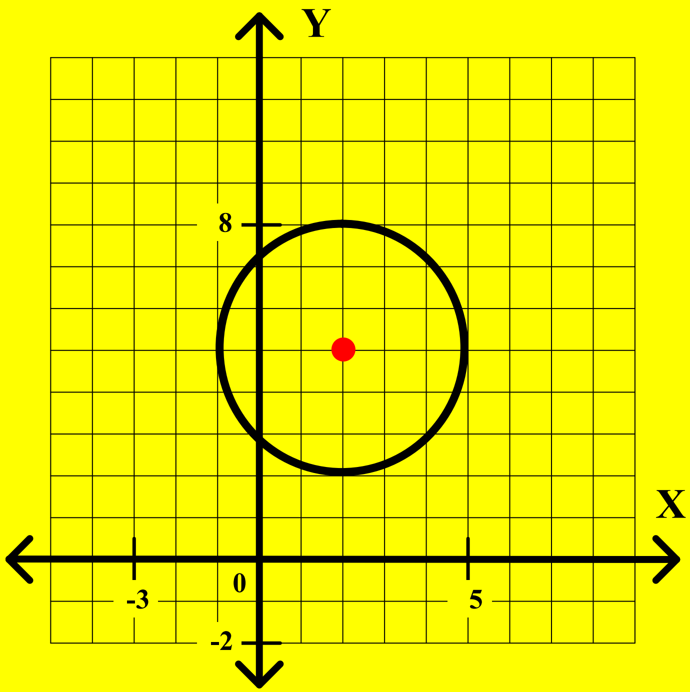
$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) ______________________



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$$

$$x^2 + y^2 - 4x - 10y + 29 = 9$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

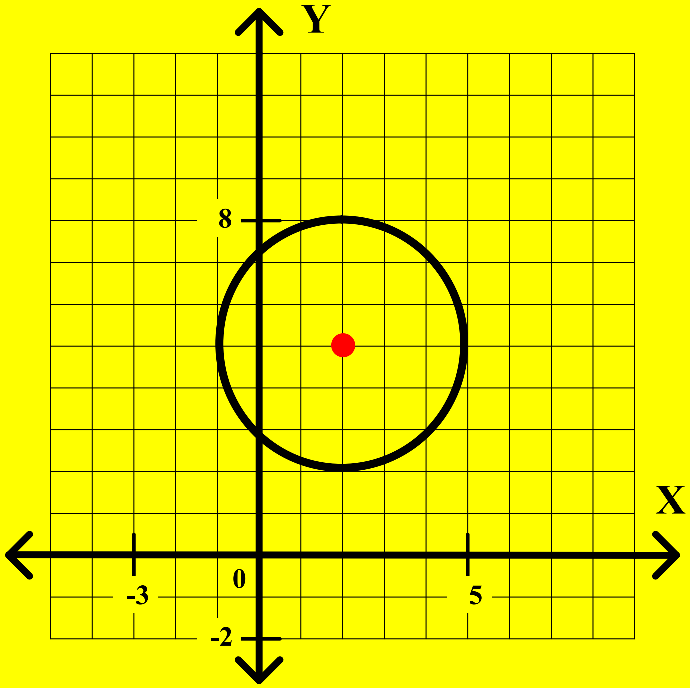
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) x^2



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$$

$$x^2 + y^2 - 4x - 10y + 29 = 9$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

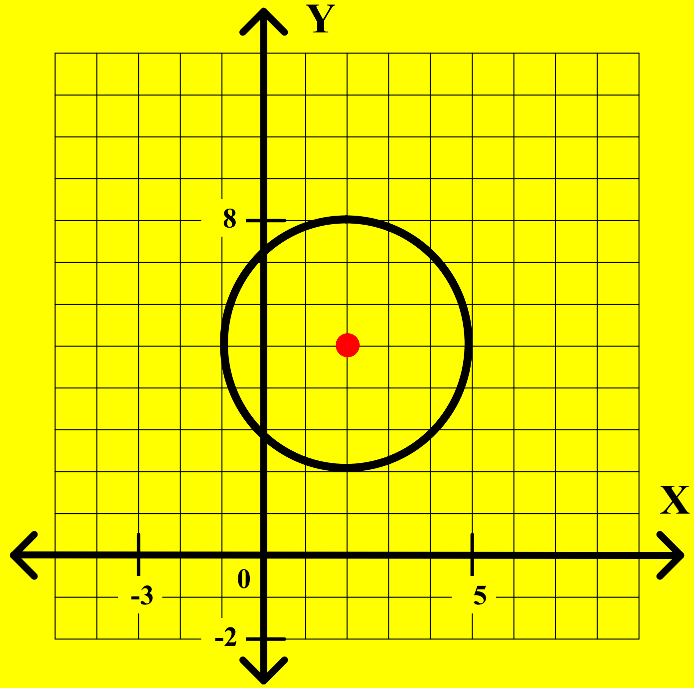
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) $x^2 + y^2$



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$$

$$x^2 + y^2 - 4x - 10y + 29 = 9$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

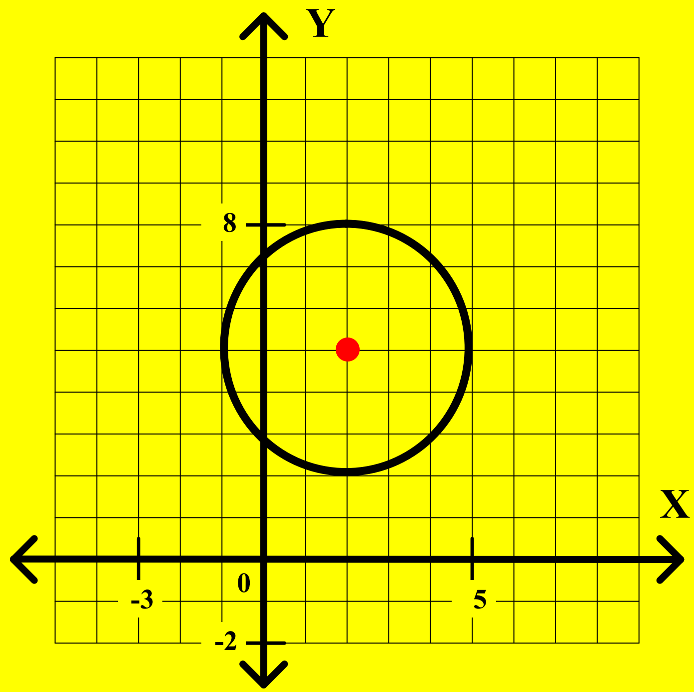
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) $x^2 + y^2 - 4x$



Center: (2, 5) Radius: 3

$h = 2\ ;\ k = 5\ ;\ r = 3$

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

$$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$$

$$x^2 + y^2 - 4x - 10y + 29 = 9$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

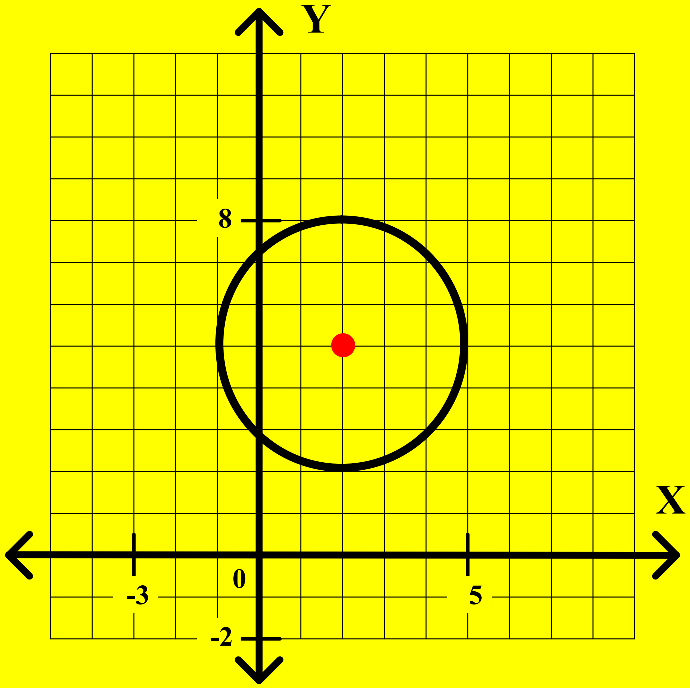
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) $x^2 + y^2 - 4x - 10y$



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$$

$$x^2 + y^2 - 4x - 10y + 29 = 9$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

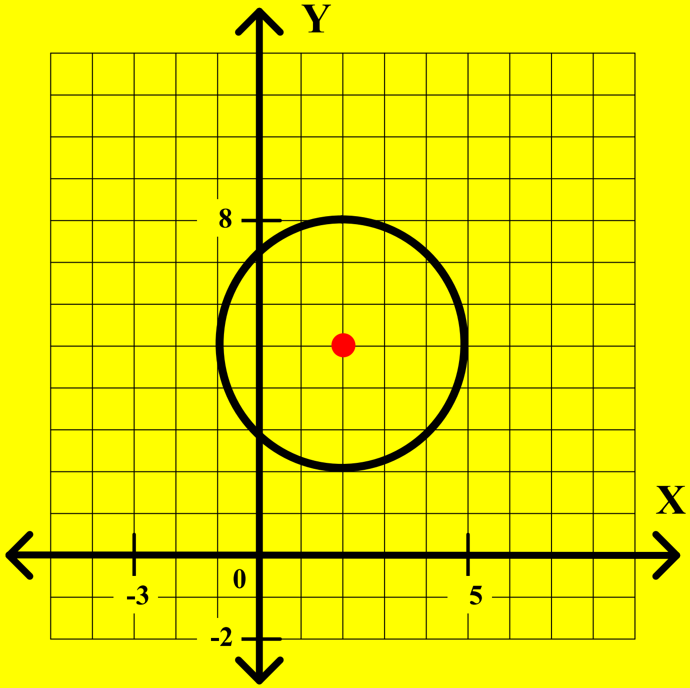
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2   Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) $x^2 + y^2 - 4x - 10y + 20$



Center: (2, 5)   Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$$

$$x^2 + y^2 - 4x - 10y + 29 = 9$$

Standard Form Equation of a Circle
Center: (h, k)   Radius: r

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

General Form Equation of a Circle

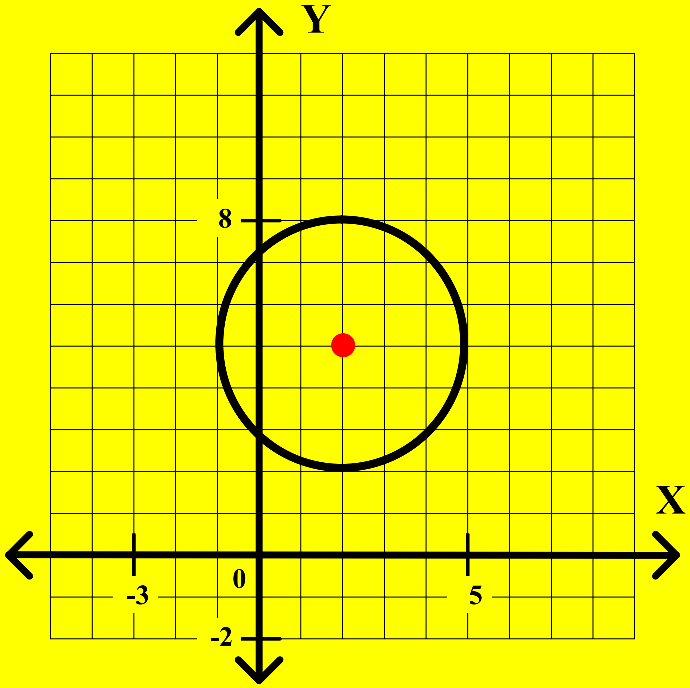
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) $x^2 + y^2 - 4x - 10y + 20 = 0$



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

$x^2 + y^2 - 4x - 10y + 29 = 9$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

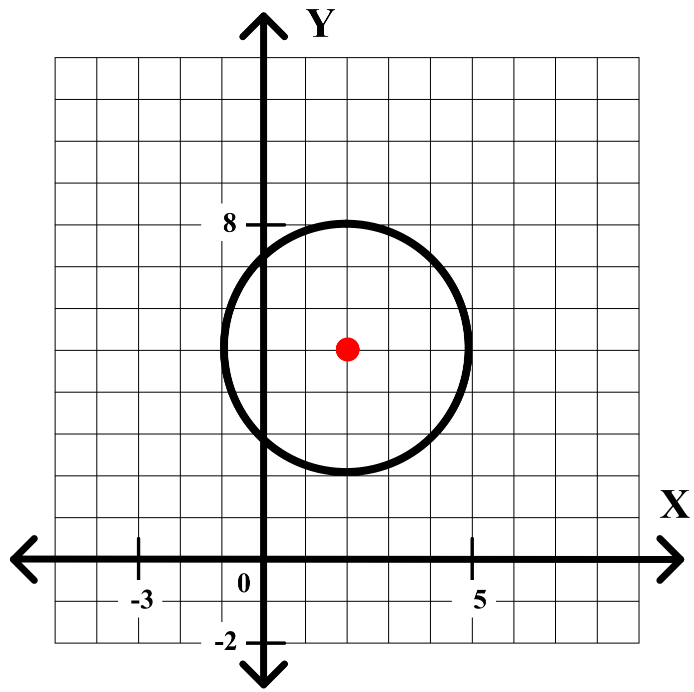
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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

(b) $x^2 + y^2 - 4x - 10y + 20 = 0$



Center: (2, 5) Radius: 3

$h = 2$; $k = 5$; $r = 3$

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

$x^2 - 4x + 4 + y^2 - 10y + 25 = 9$

$x^2 + y^2 - 4x - 10y + 29 = 9$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

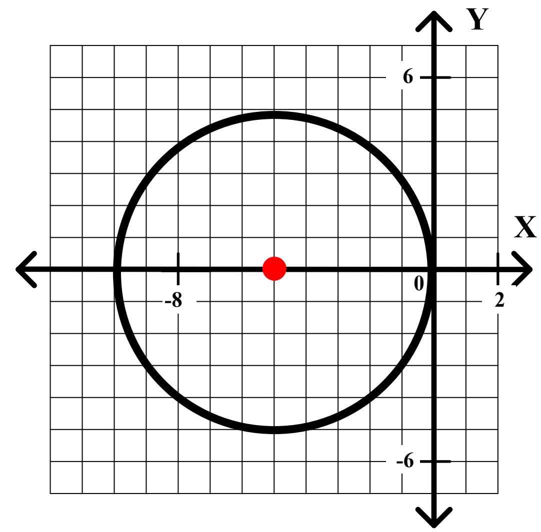
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2   Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ____________________________

(b) ____________________________



Standard Form Equation of a Circle
Center: (h, k)   Radius: r

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

General Form Equation of a Circle

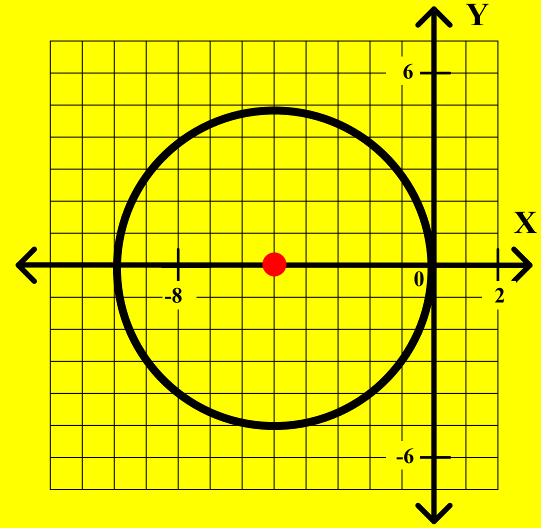
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ____________________________

(b) ____________________________



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

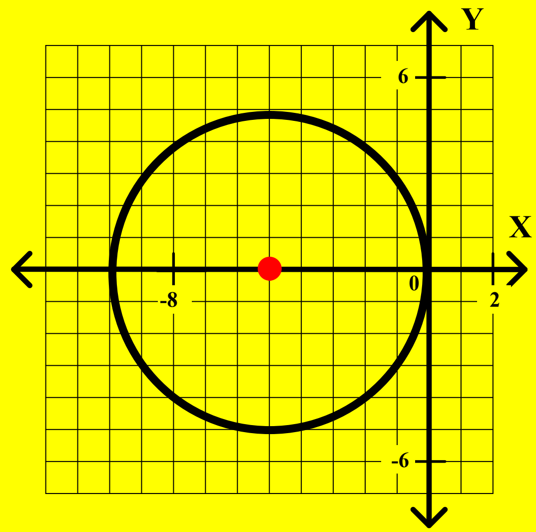
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ______________________

(b) ______________________

Center:



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

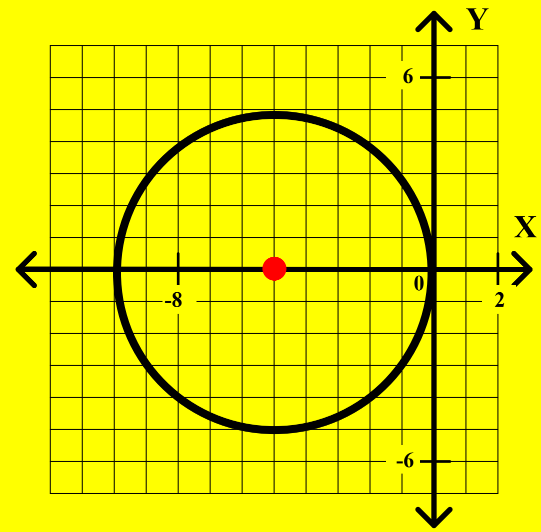
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ____________________________

(b) ____________________________

Center: (-5, 0)



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

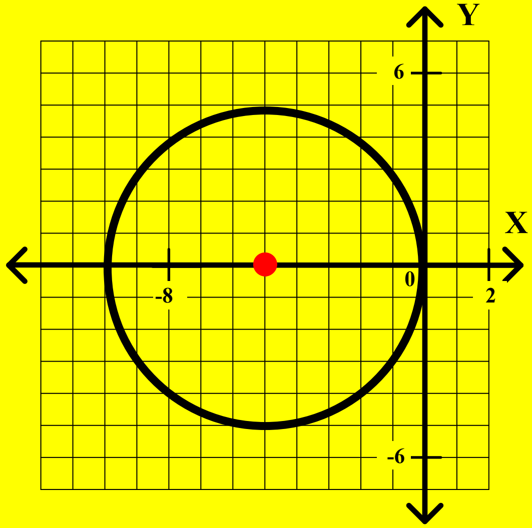
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ______________________________

(b) ______________________________

Center: (-5, 0) Radius:



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

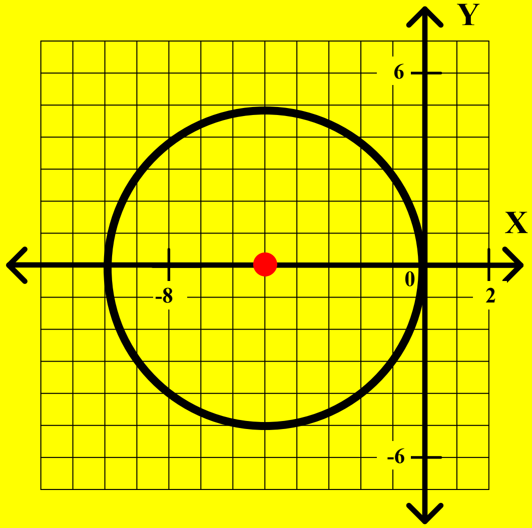
Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ______________________________

(b) ______________________________

Center: (-5, 0) Radius: 5



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

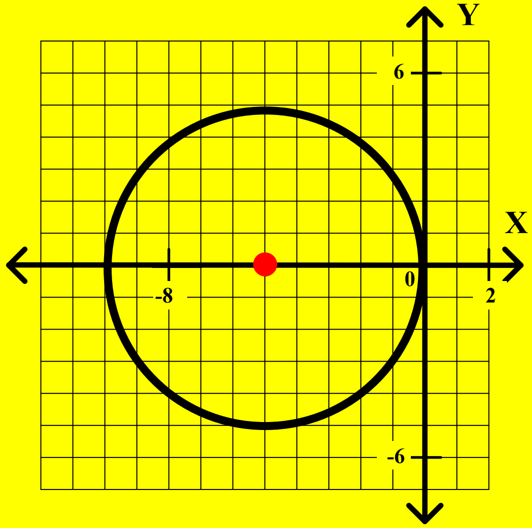
For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ____________________________

(b) ____________________________

Center: (-5, 0) Radius: 5

$h =$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2   Class Worksheet #1 Unit 7

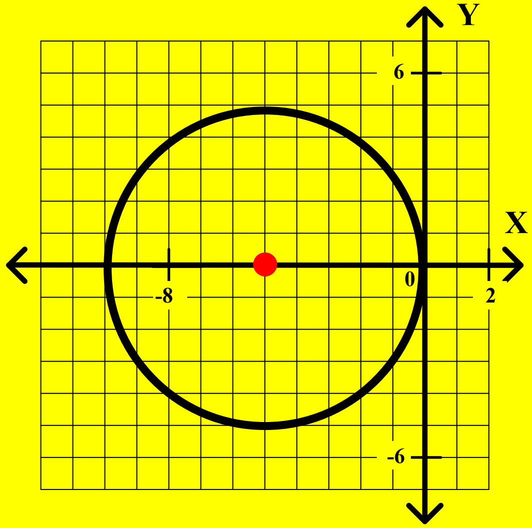
For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ______________________________

(b) ______________________________

Center: (-5, 0)   Radius: 5

$h = -5$



Standard Form Equation of a Circle
Center: (h, k)   Radius: r

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

General Form Equation of a Circle

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Algebra 2 Class Worksheet #1 Unit 7

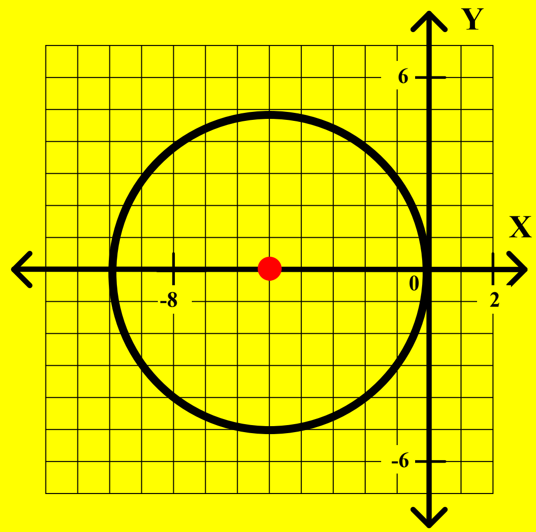
For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ______________________________

(b) ______________________________

Center: (-5, 0) Radius: 5

$h = -5$; $k =$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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General Form Equation of a Circle

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Algebra 2 Class Worksheet #1 Unit 7

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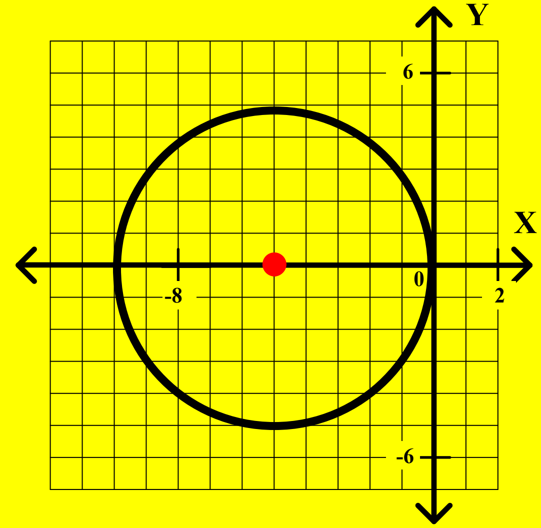
(b) ______________________________

Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$



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Algebra 2   Class Worksheet #1 Unit 7

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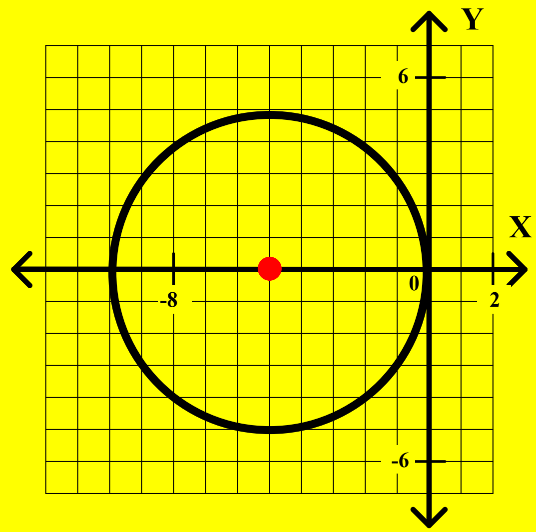
(b) ____________________________

Center: (-5, 0)   Radius: 5

$h = -5$; $k = 0$; $r =$



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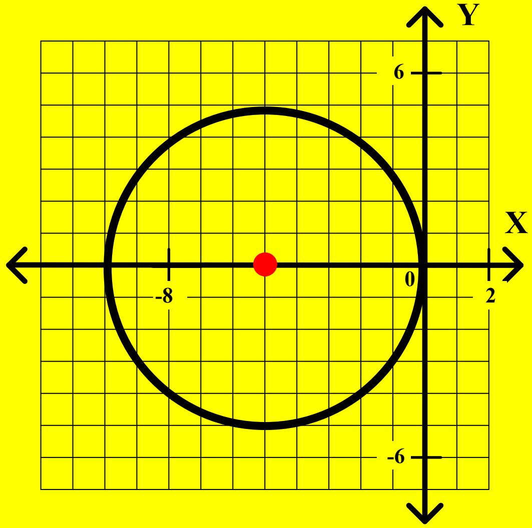

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Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

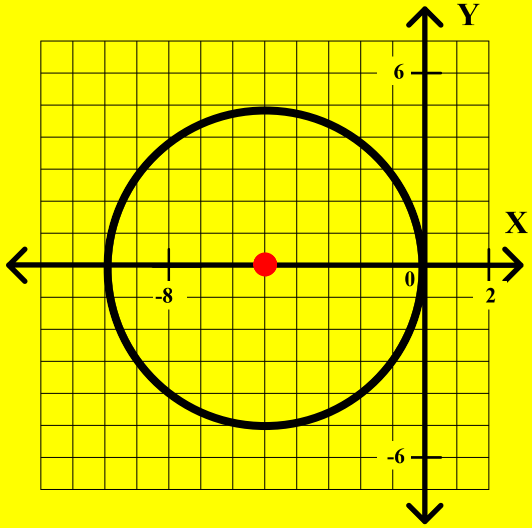
5. (a) ______________________________

(b) ______________________________

Center: (-5, 0) Radius: 5

h = -5 ; k = 0 ; r = 5

$(x - -5)^2$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

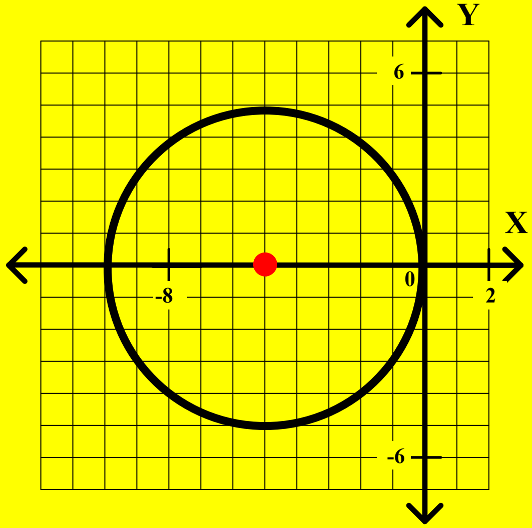
5. (a) ______________________________

(b) ______________________________

Center: (-5, 0) Radius: 5

$h = -5\ ;\ k = 0\ ;\ r = 5$

$(x - -5)^2 +$



Standard Form Equation of a Circle
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General Form Equation of a Circle

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Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

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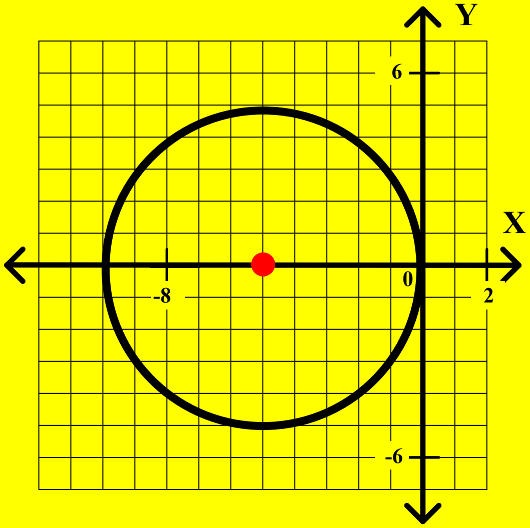
(b) ______________________________

Center: (-5, 0) Radius: 5

$h = -5 \; ; \; k = 0 \; ; \; r = 5$

$(x - -5)^2 + (y - 0)^2$



Standard Form Equation of a Circle

Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

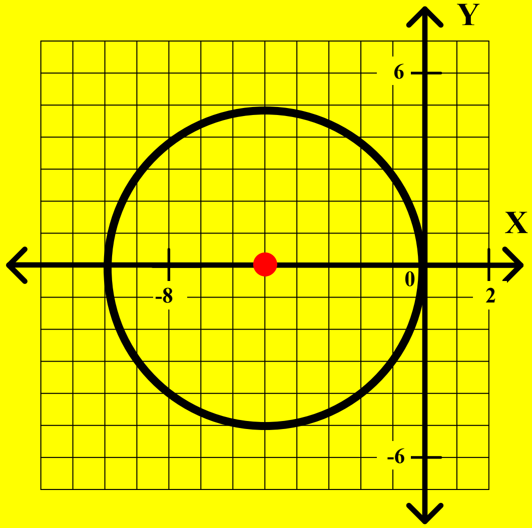
5. (a) ____________________________

(b) ____________________________

Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$; $r = 5$

$(x - -5)^2 + (y - 0)^2 =$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

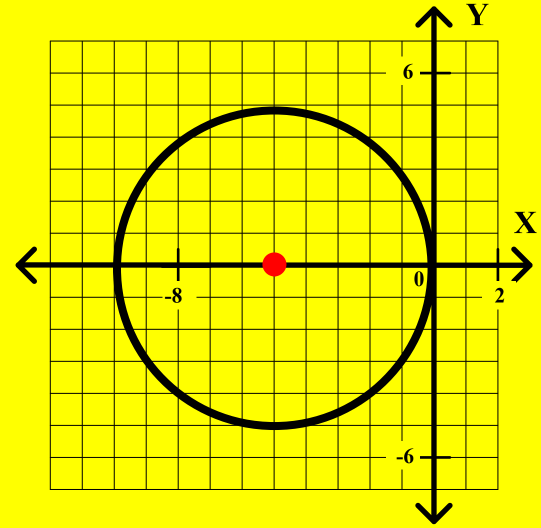
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) ____________________________

(b) ____________________________



Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$; $r = 5$

$$(x - -5)^2 + (y - 0)^2 = 5^2$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

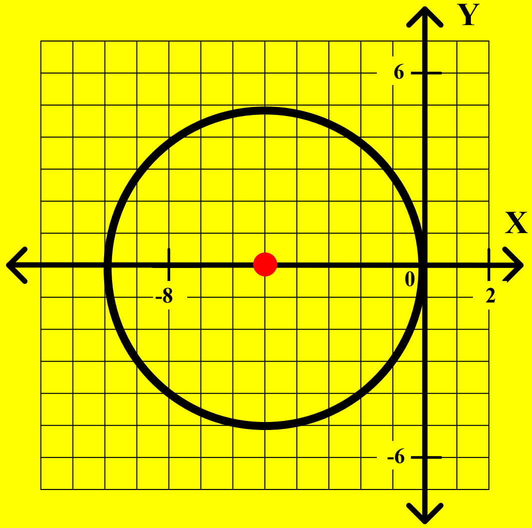
5. (a) $(x + 5)^2$ ______________________

(b) ______________________

Center: (-5, 0) Radius: 5

h = -5 ; k = 0 ; r = 5

$(x - -5)^2 + (y - 0)^2 = 5^2$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

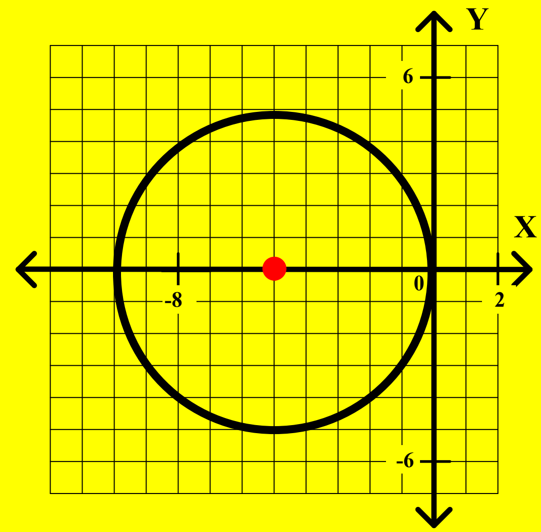
$x^2 + y^2 + Dx + Ey + F = 0$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) $(x + 5)^2 + y^2$ ______________________

(b) ______________________



Center: (-5, 0) Radius: 5

$h = -5 \; ; \; k = 0 \; ; \; r = 5$

$(x - -5)^2 + (y - 0)^2 = 5^2$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

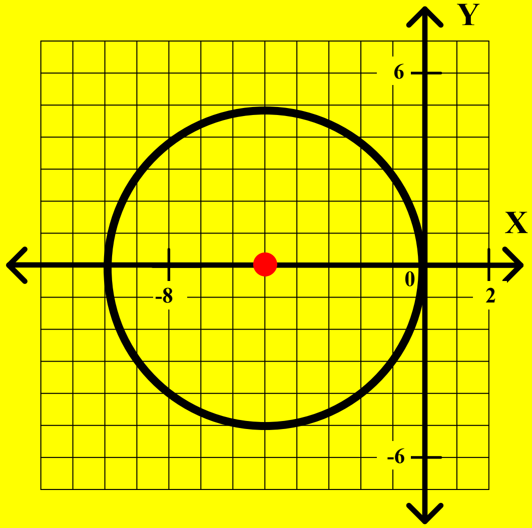
5. (a) $(x + 5)^2 + y^2 = 25$

(b) ______________________

Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$; $r = 5$

$(x - -5)^2 + (y - 0)^2 = 5^2$



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

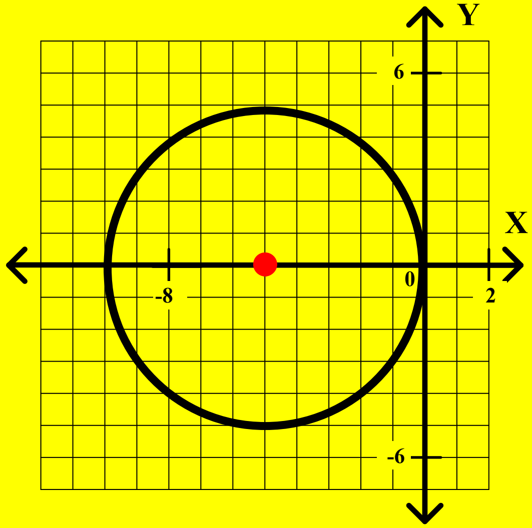
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) $(x + 5)^2 + y^2 = 25$

(b) ______________________



Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$; $r = 5$

$$(x - -5)^2 + (y - 0)^2 = 5^2$$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) $(x + 5)^2 + y^2 = 25$

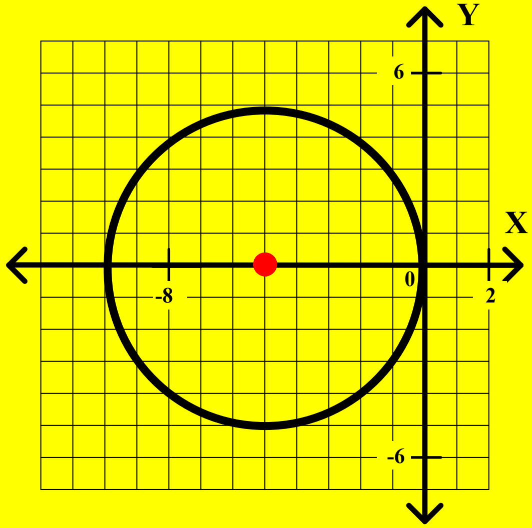
(b) ______________________

Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$; $r = 5$

$(x - -5)^2 + (y - 0)^2 = 5^2$

x^2



Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

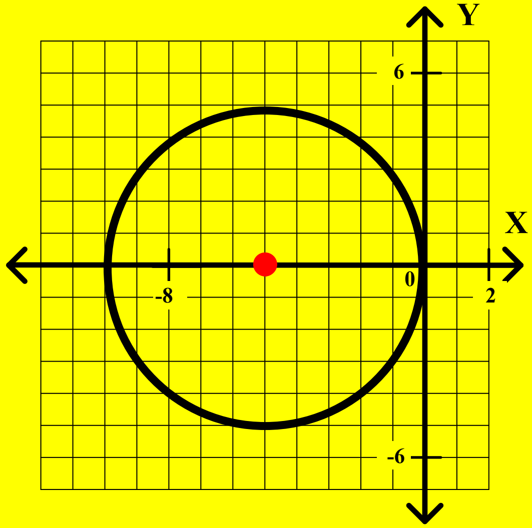
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) $(x + 5)^2 + y^2 = 25$

(b) ____________________



Center: (-5, 0) Radius: 5

$h = -5 \; ; \; k = 0 \; ; \; r = 5$

$(x - -5)^2 + (y - 0)^2 = 5^2$

$x^2 + 10x$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

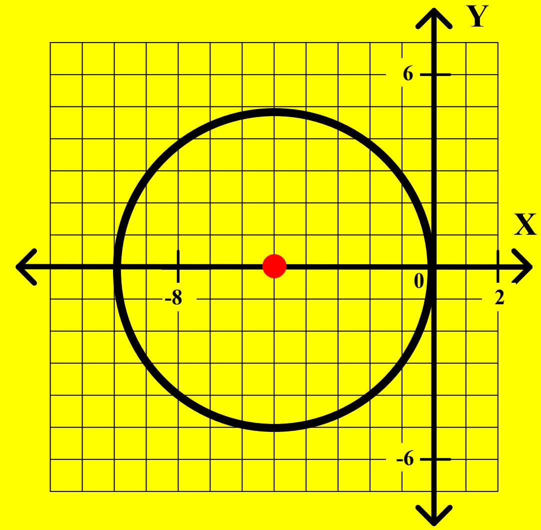
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) $(x + 5)^2 + y^2 = 25$

(b) ______________________



Center: (-5, 0) Radius: 5

$h = -5$; $k = 0$; $r = 5$

$(x - -5)^2 + (y - 0)^2 = 5^2$

$x^2 + 10x + 25$

Standard Form Equation of a Circle
Center: (h, k) Radius: r

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

General Form Equation of a Circle

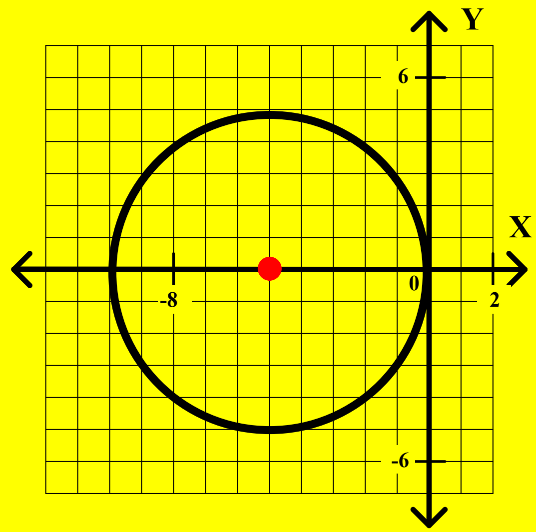
$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2   Class Worksheet #1 Unit 7

For each of the following circles, write its equation (a) in standard form and (b) in general form.

5. (a) $(x + 5)^2 + y^2 = 25$

(b) ______________________



Center: (-5, 0)   Radius: 5

$h = -5$; $k = 0$; $r = 5$

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$x^2 + 10x + 25 + y^2$

Standard Form Equation of a Circle
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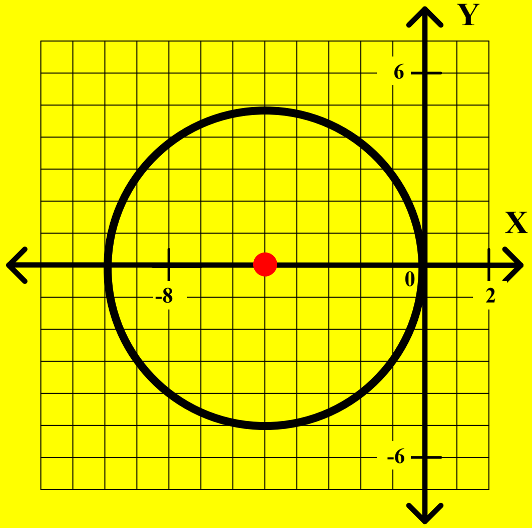

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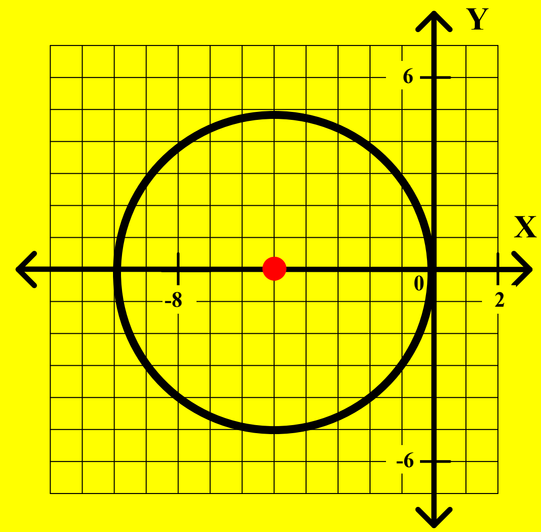

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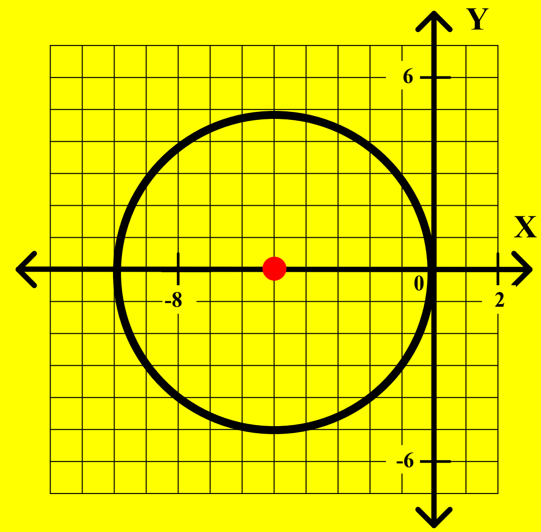

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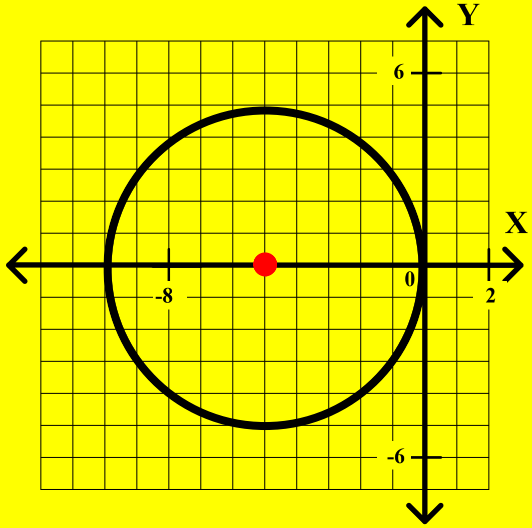

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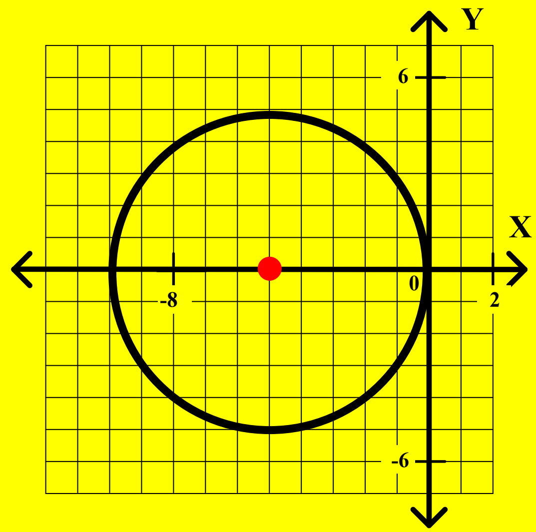

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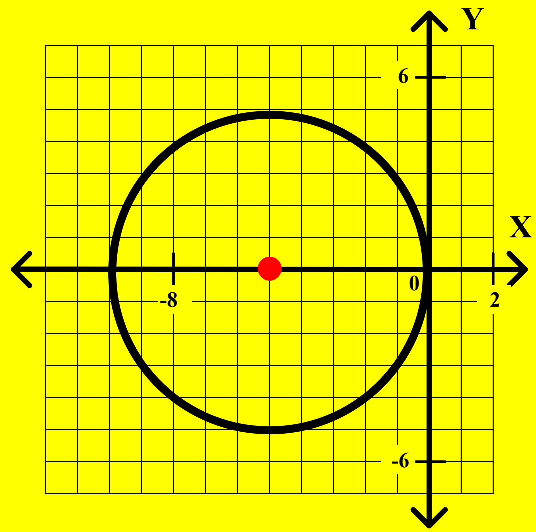

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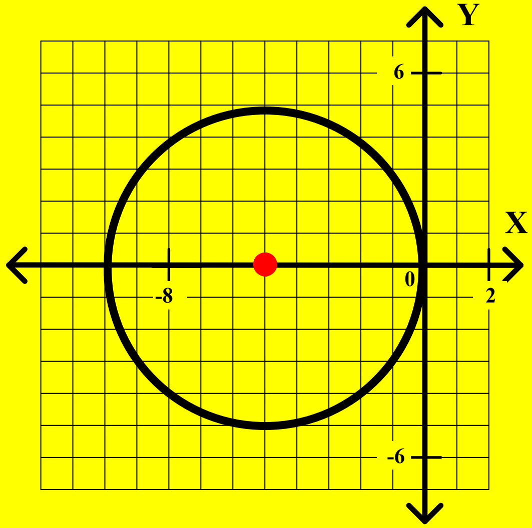

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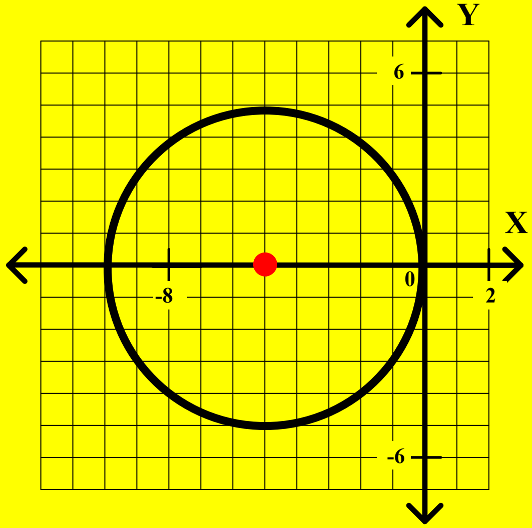

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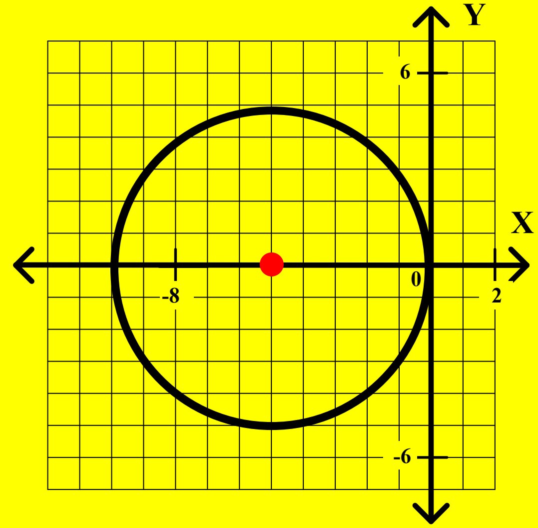

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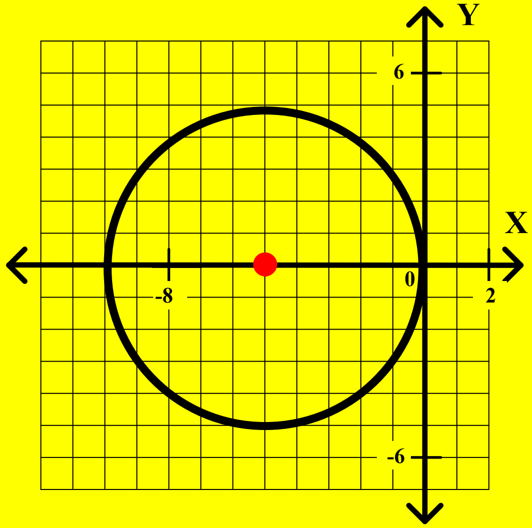

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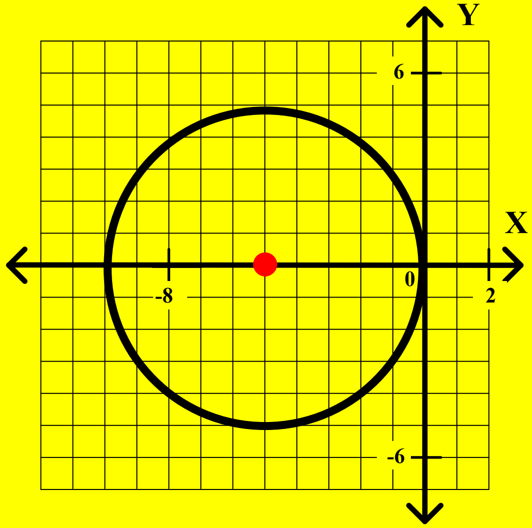

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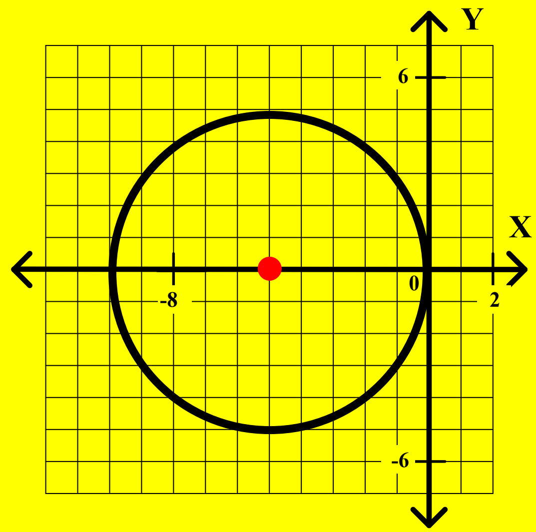

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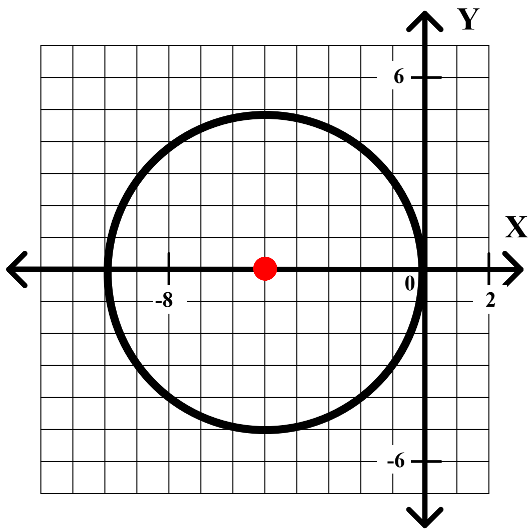

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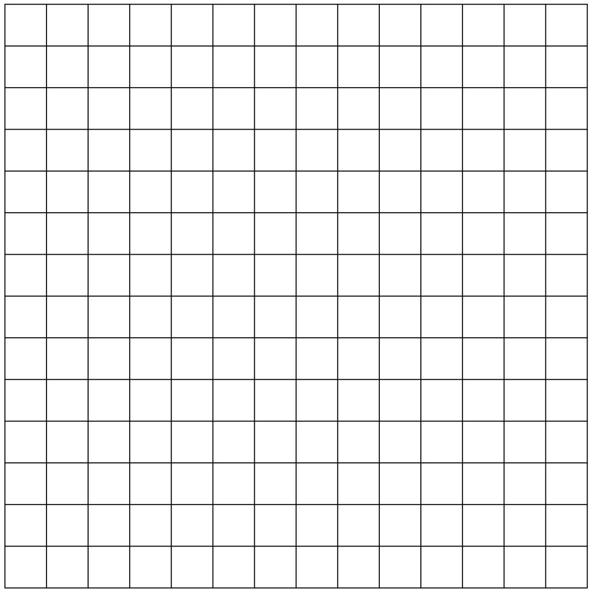
$$x^2 + y^2 - 6x + 4y - 3 = 0.$$

Find the standard form equation and graph the circle.



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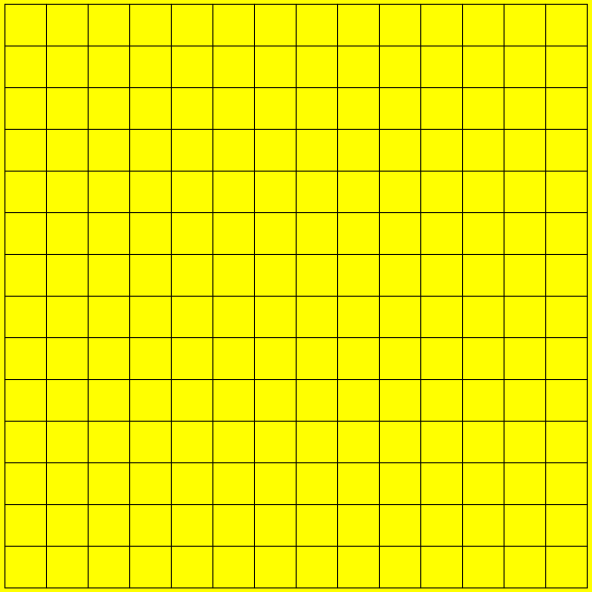

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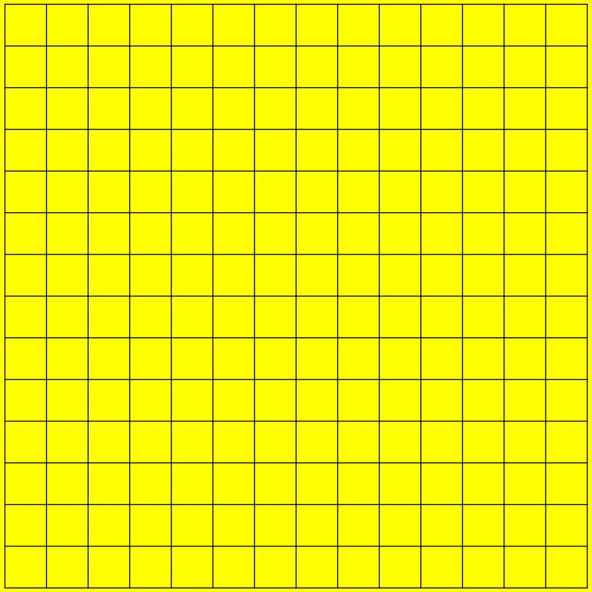

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Find the standard form equation and graph the circle.

Rearrange the terms of the equation.

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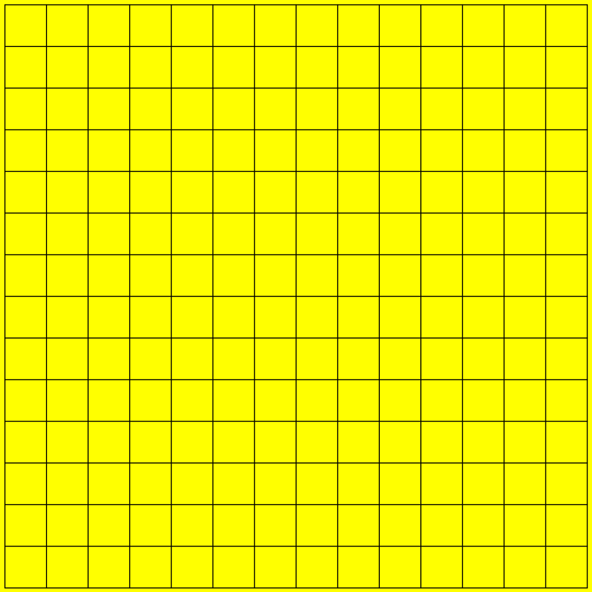

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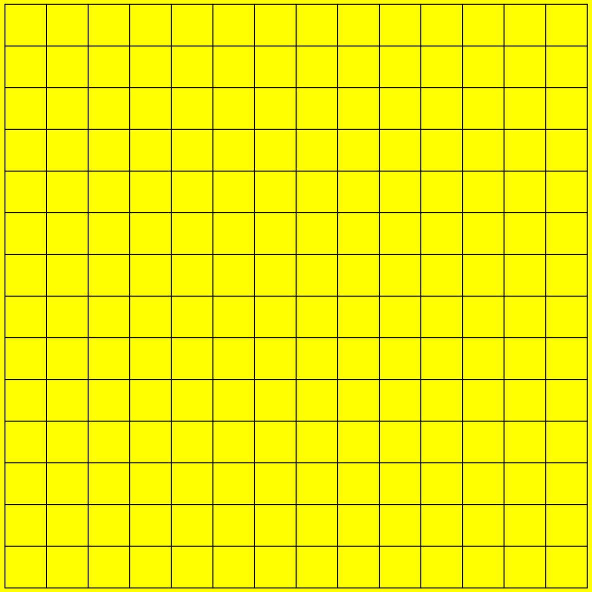

$$(x^2 - 6x\ )$$

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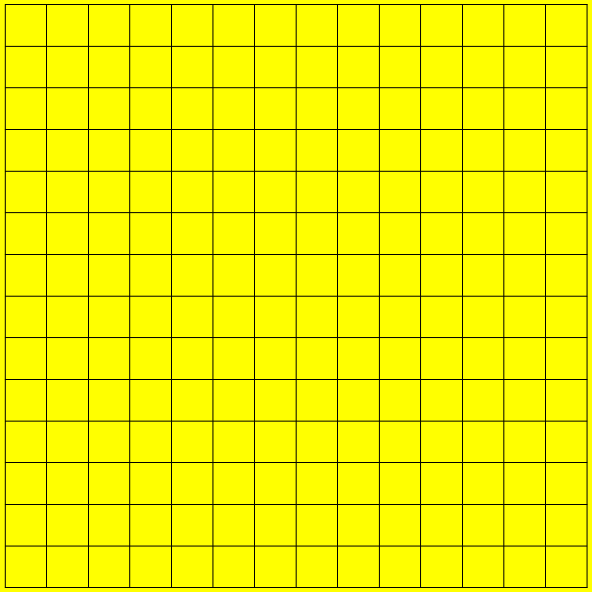

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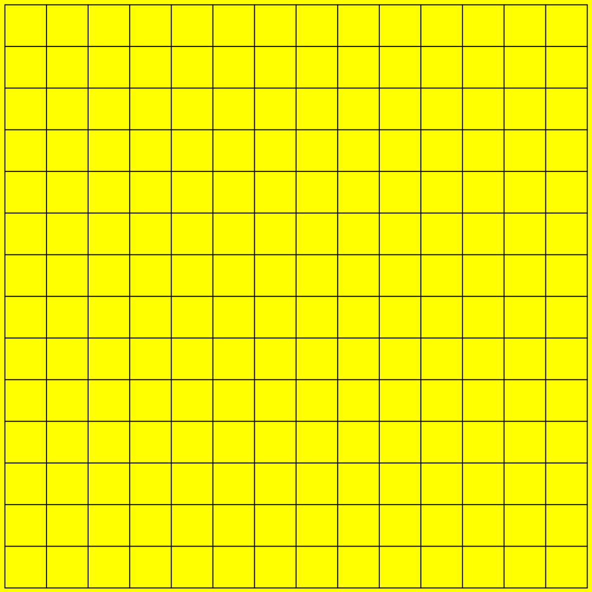

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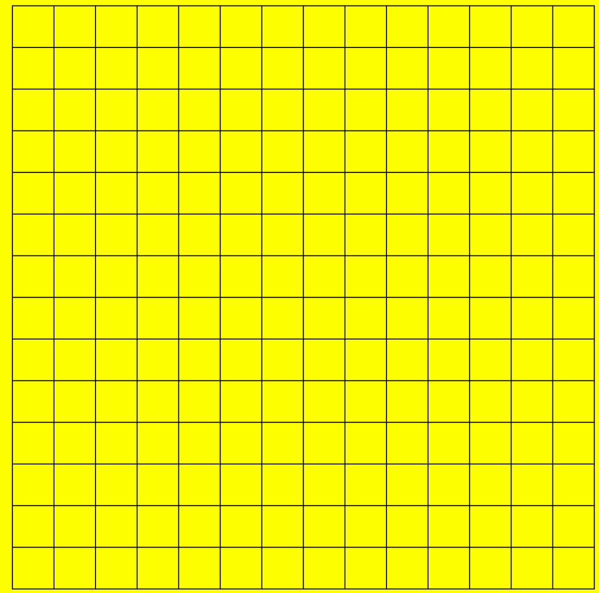

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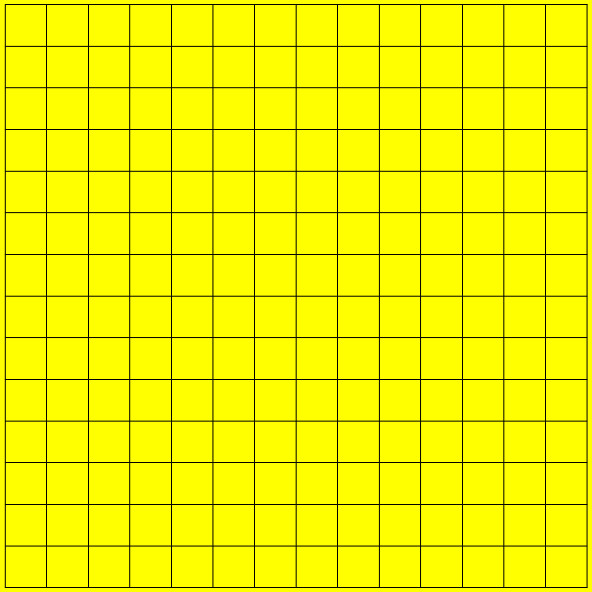

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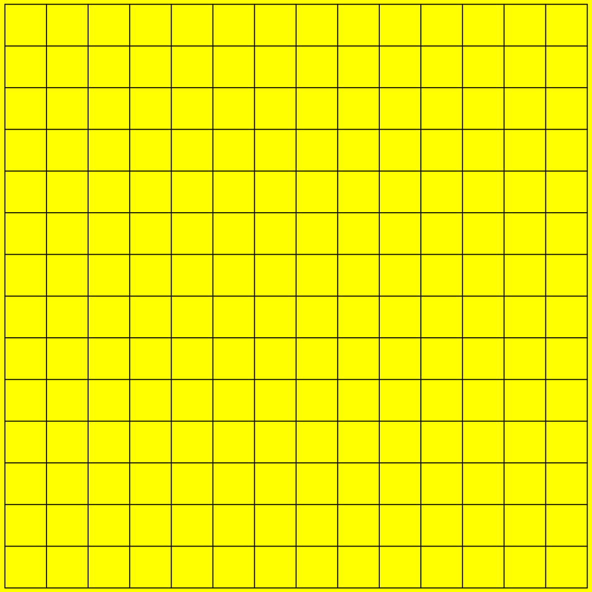

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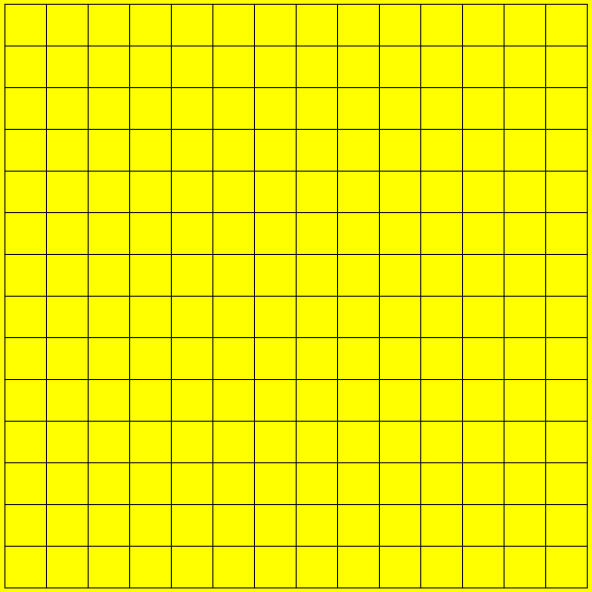

$$(x^2 - 6x \quad) + (y^2 + 4y \quad) = 3$$

Complete the square.

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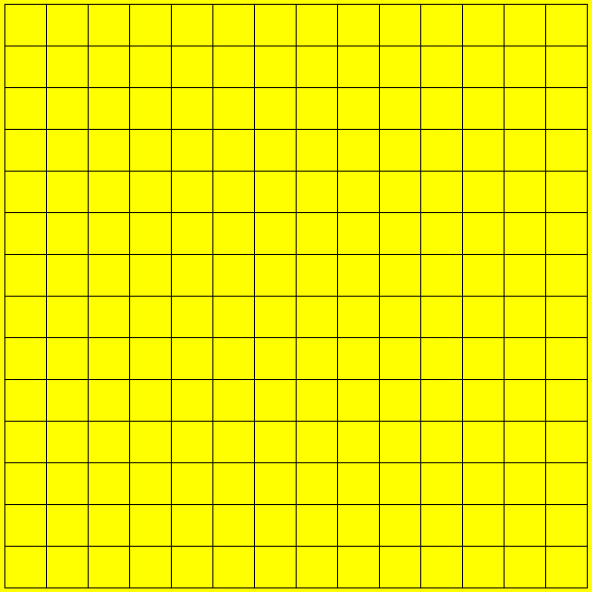

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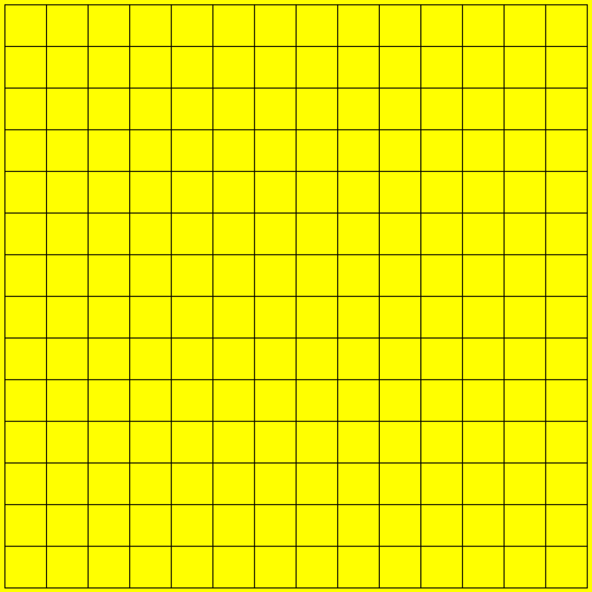

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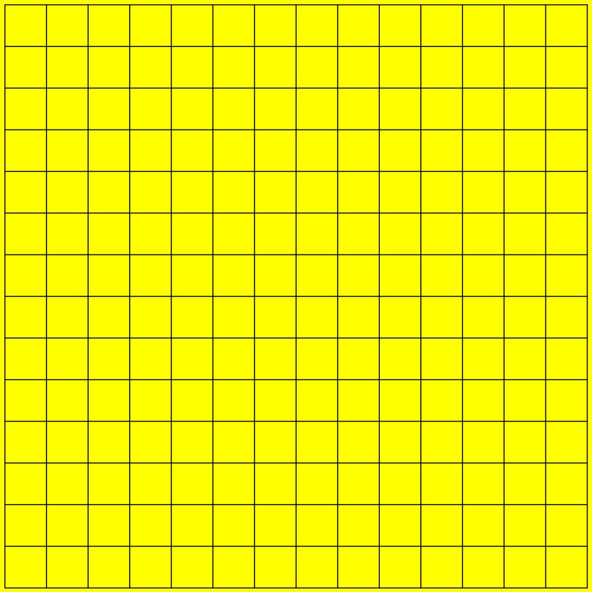
Complete the square.



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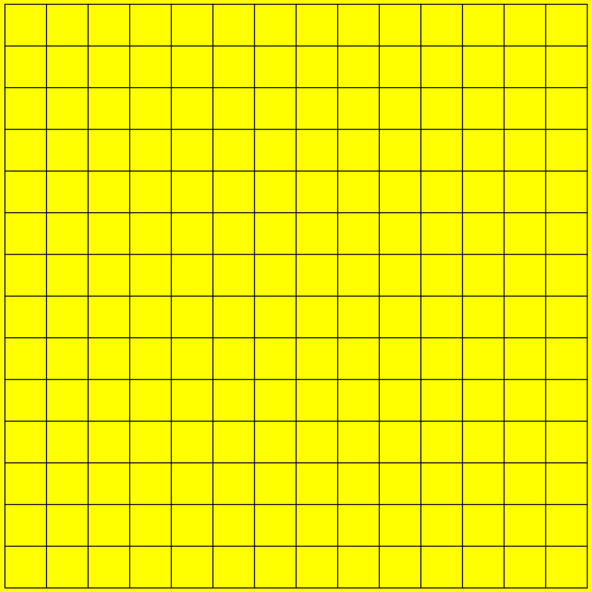

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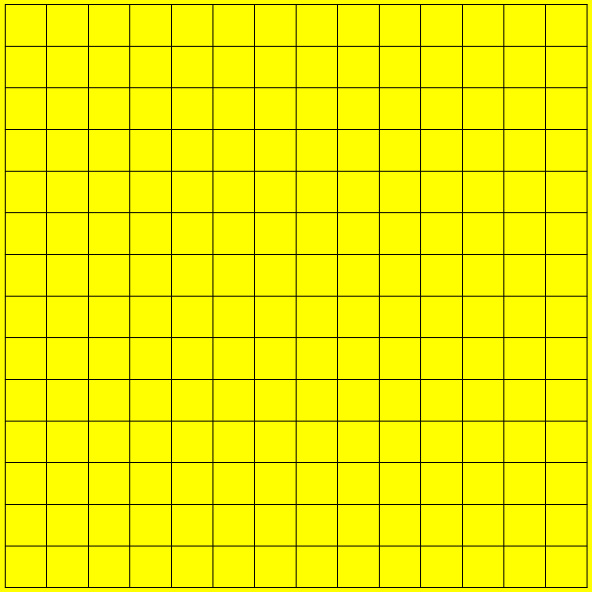

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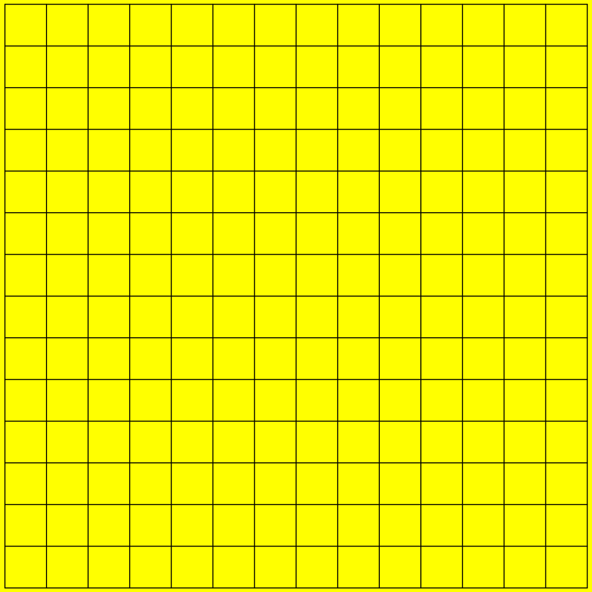

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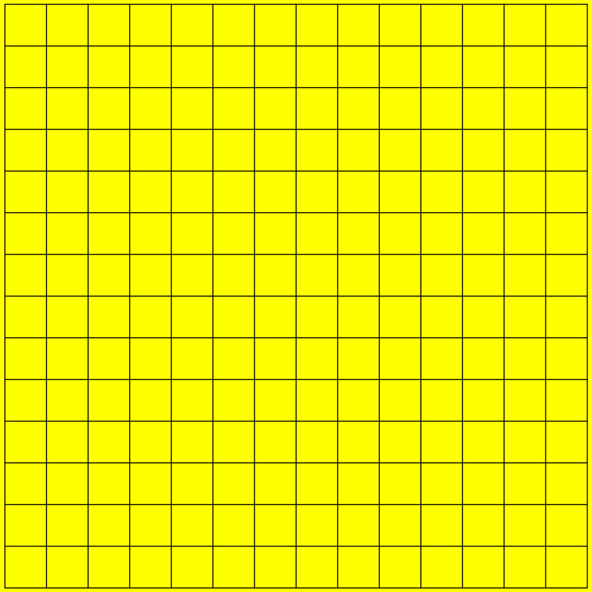

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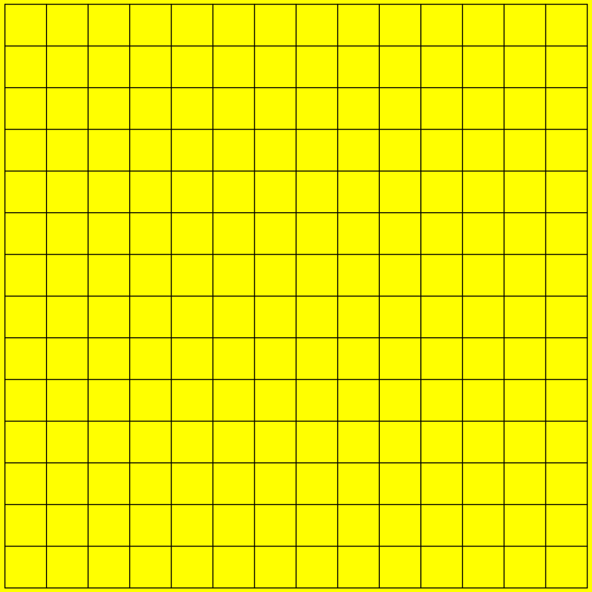

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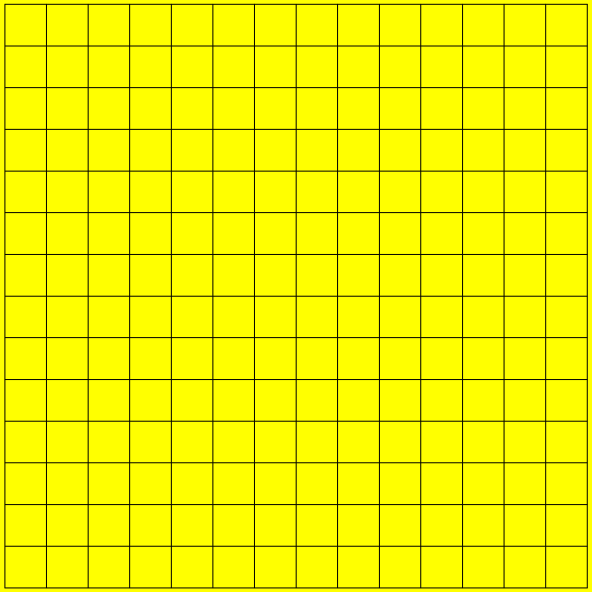

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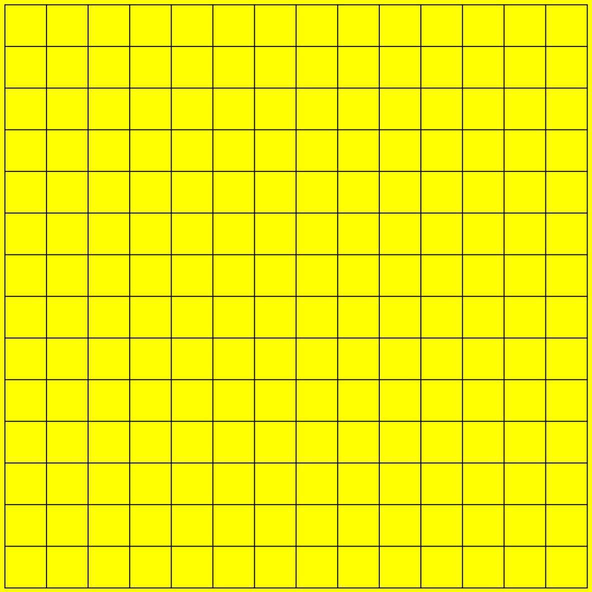

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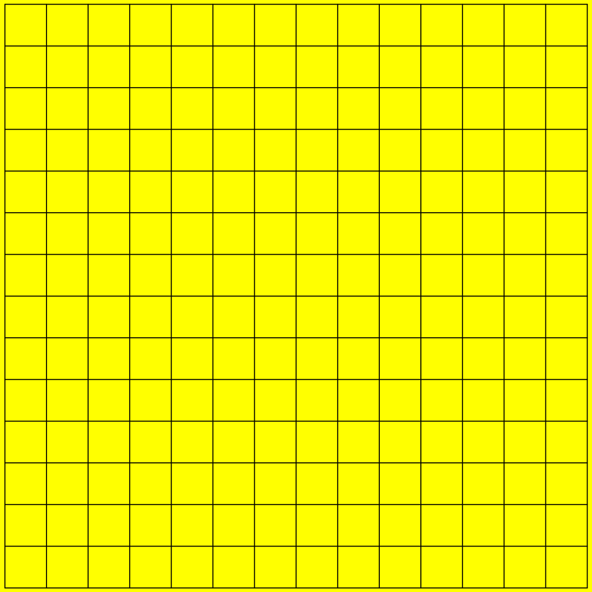

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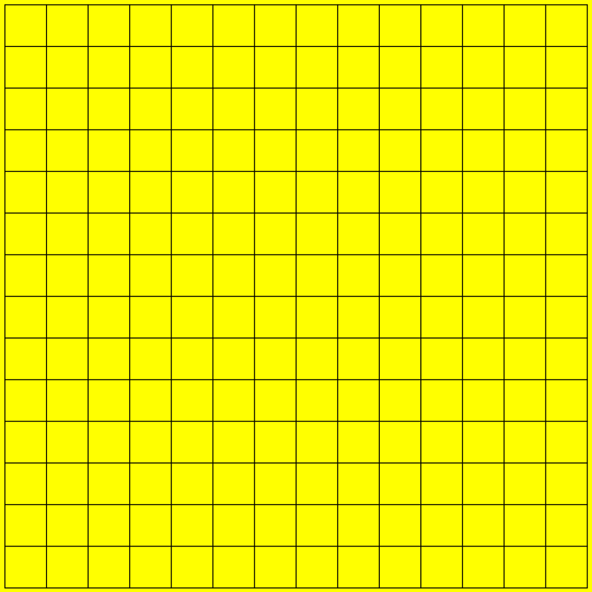

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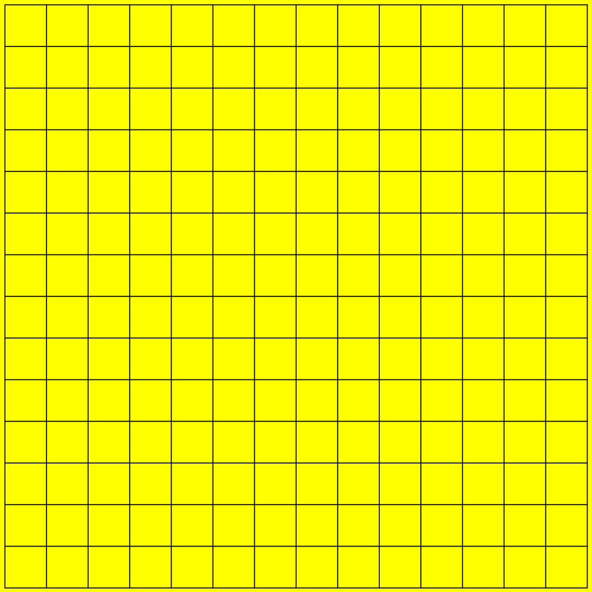

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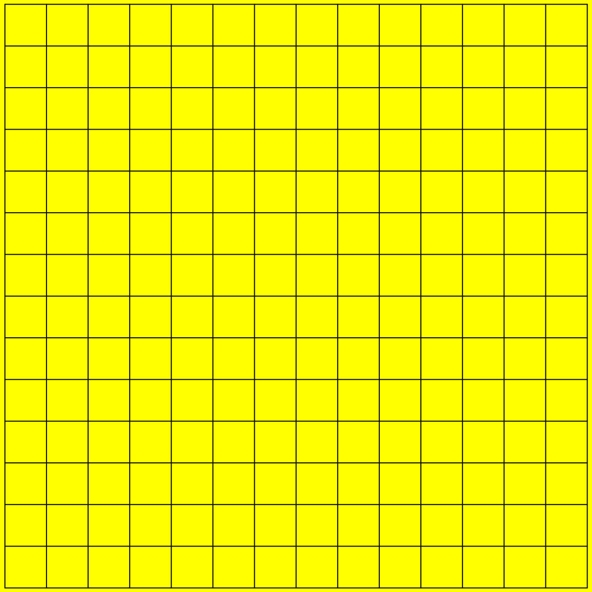

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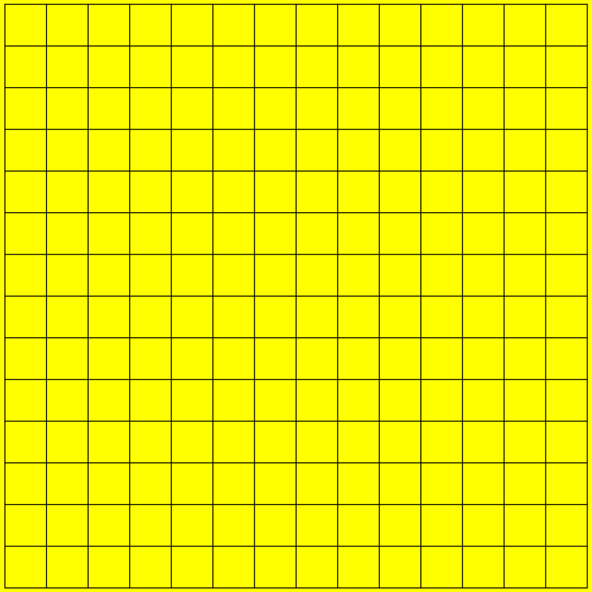

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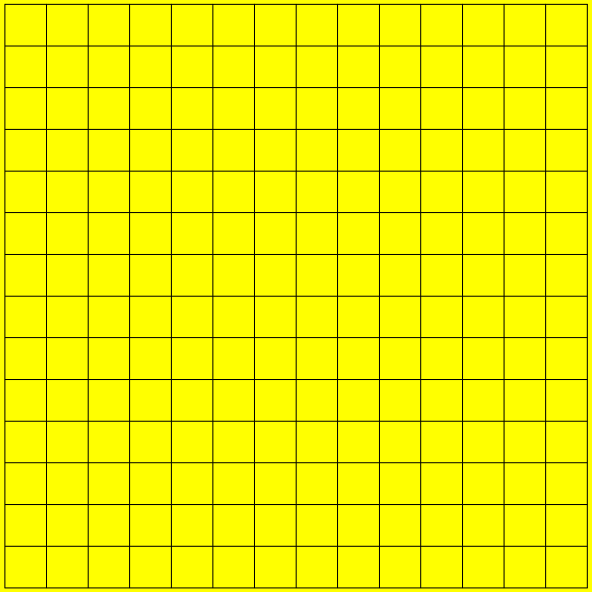

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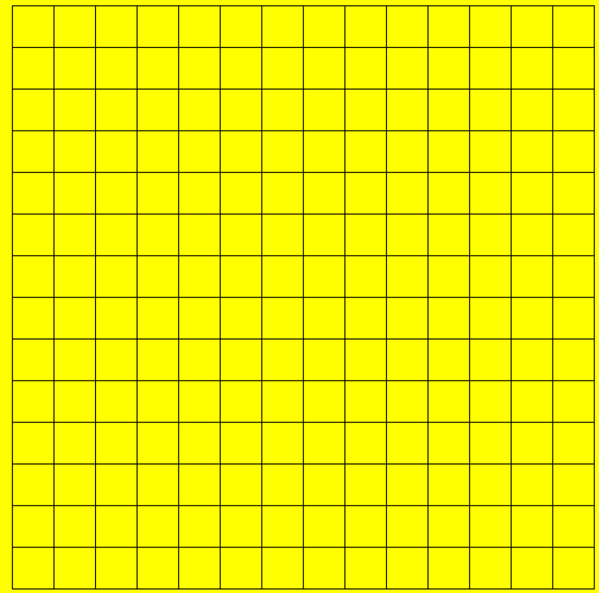

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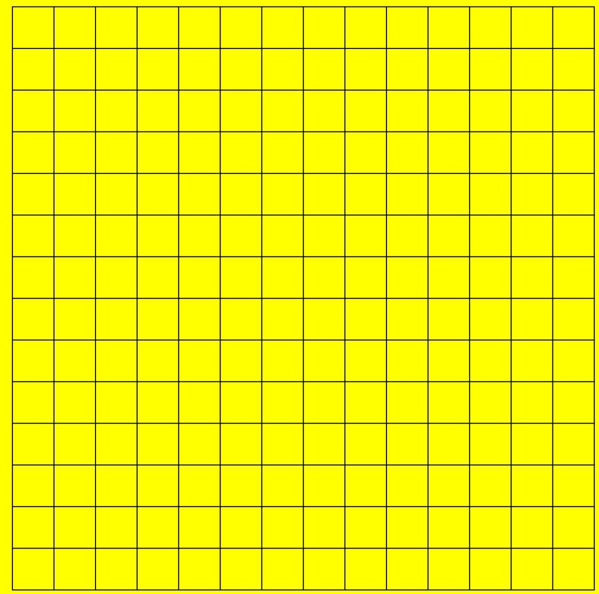

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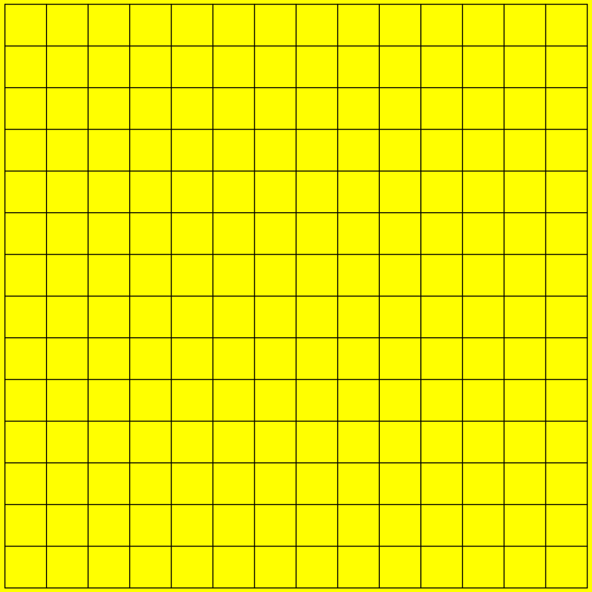

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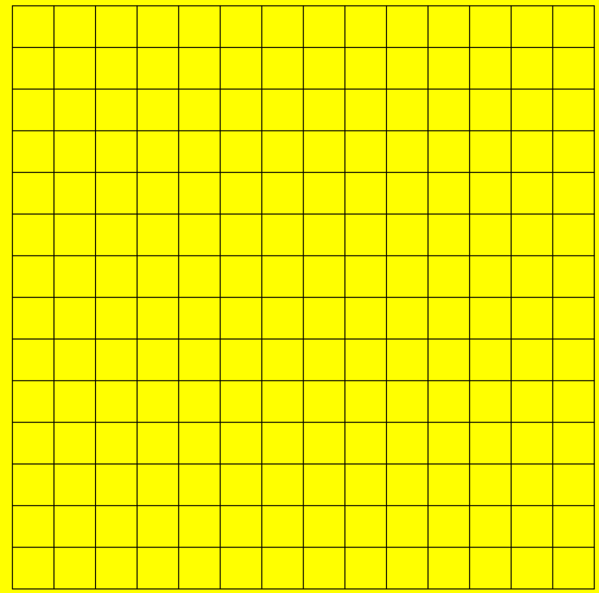

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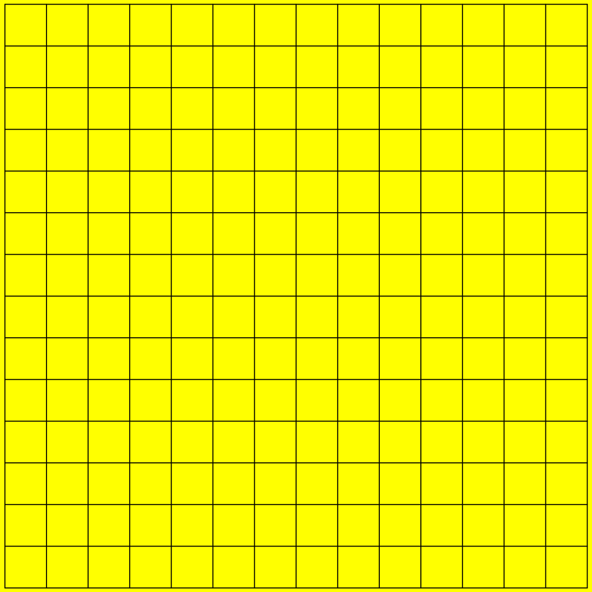

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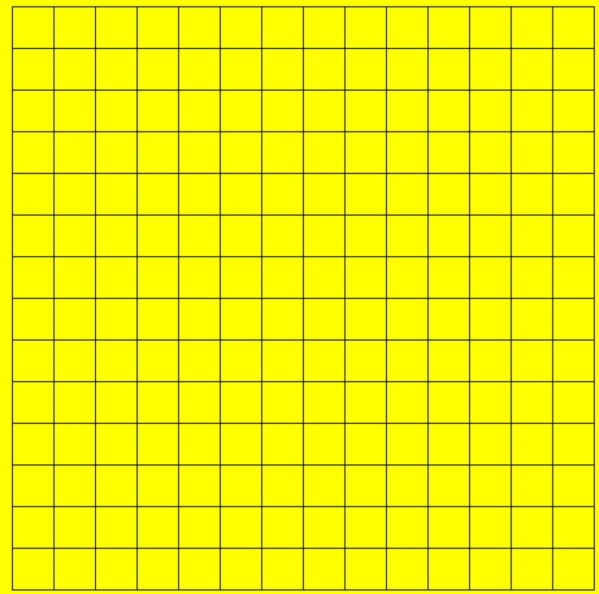

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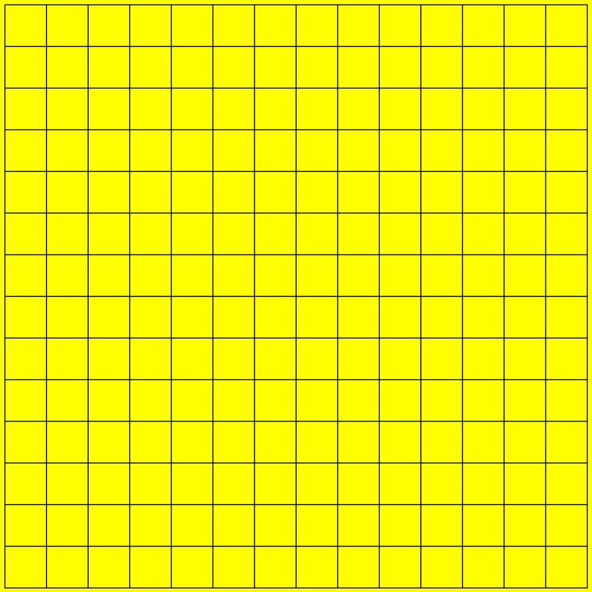

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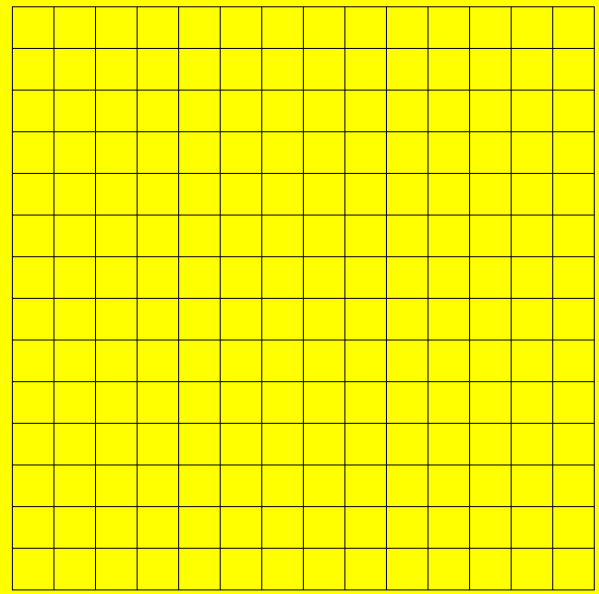

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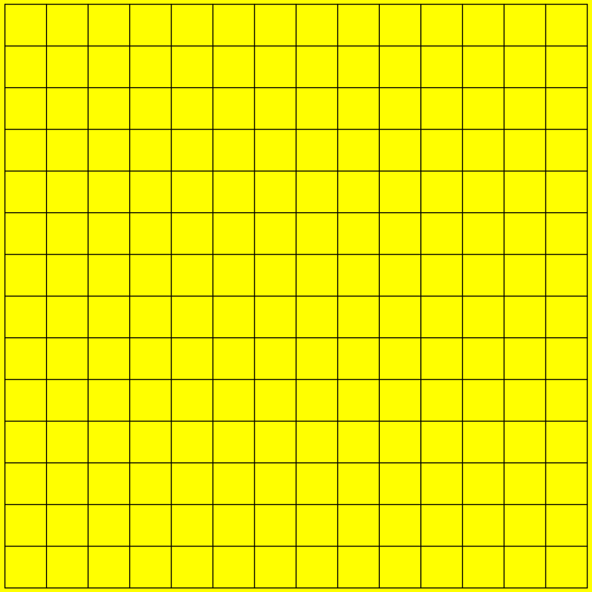

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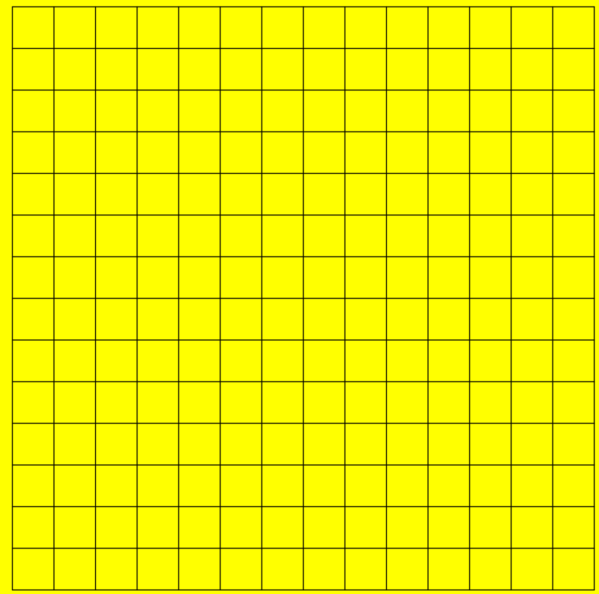

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$$(x - h)^2 + (y - k)^2 = r^2$$

General Form Equation of a Circle

$$x^2 + y^2 + Dx + Ey + F = 0$$

Algebra 2 Class Worksheet #1 Unit 7

6. Given: A circle has general form equation

$$x^2 + y^2 - 6x + 4y - 3 = 0.$$

Find the standard form equation and graph the circle.

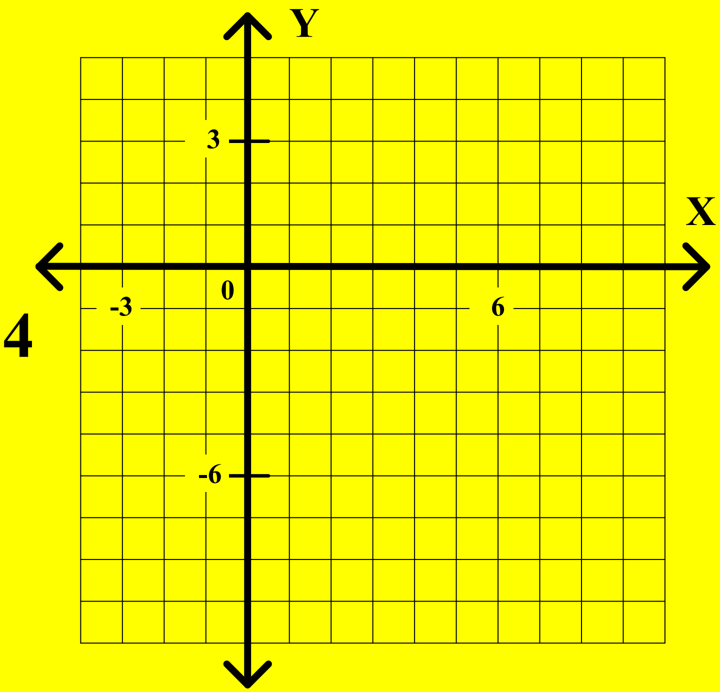
$$(x^2 - 6x\ ) + (y^2 + 4y\ ) = 3$$

$$(x^2 - 6x + 9) + (y^2 + 4y + 4) = 3 + 9 + 4$$

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

$h = 3 \quad k = -2 \quad r = 4$

center : (3, -2) radius: 4



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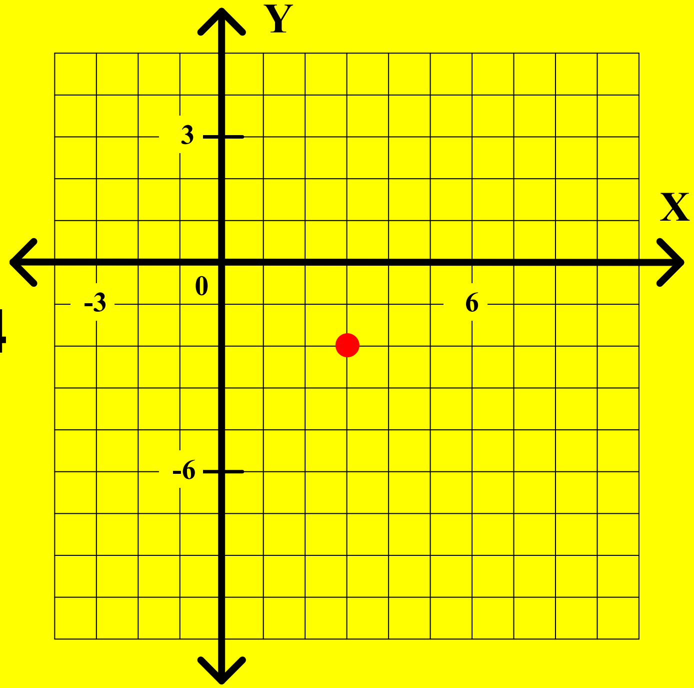

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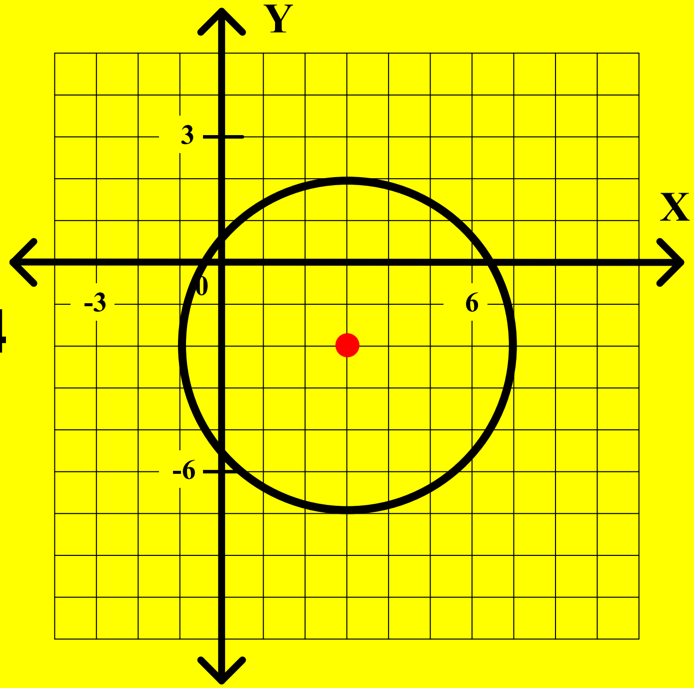

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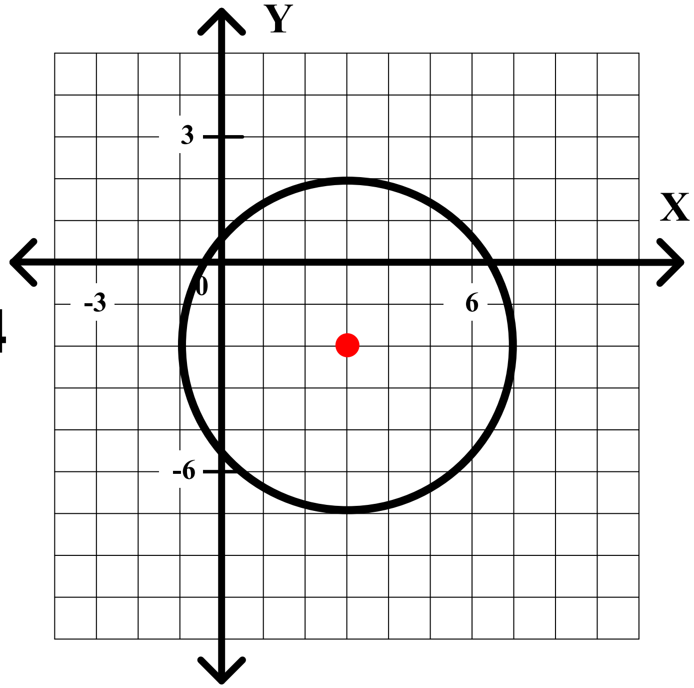

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