

Bell Ringer $y = a(x - h)^2 + k$

Thursday 11/8

Write equations that fit the criteria given:

$(3, 2)$
 (h, k)
 $a = 3$

1. A quadratic equation that has been shifted right 3 units, shifted up 2 units, and stretched by a factor of 3.

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

2. A quadratic function that has been reflected over the x-axis, shifted left 4 units, and compressed by a factor of $\frac{1}{2}$.

$$y = -\frac{1}{2}(x + 4)^2$$

$a = -\frac{1}{2}$
 $(-4, 0)$
 h, k

3. A Quadratic function that has been reflected over the x-axis, shifted down 4, and stretched by a factor of 2.

$(0, -4)$
 h, k
 $a = -2$

$$y = -2(x - 0)^2 - 4$$

$$y = -2x^2 - 4$$

4. A quadratic equation that has been stretched by a factor of 4, and shifted up 2 units.

$(0, 2)$
 h, k
 $a = 4$

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

$$y = 4x^2 + 2$$

$$\sqrt{-25}$$
$$\sqrt{5} \cdot \sqrt{5}$$
$$5i$$

$$\sqrt{-32}$$
$$= 2 \cdot 2i\sqrt{2}$$
$$= 4i\sqrt{2}$$

$$\begin{array}{r} (3 - i) - (5 + 3i) \\ -5 - 3i \\ \hline -2 - 4i \end{array}$$

$$\begin{array}{r} +9 - 25i^2 \\ 9 - 25(-1) \\ 9 + 25 \\ 34 \end{array}$$

$$(3 + 5i)(3 - 5i)$$

	3	+5i
3	+9	+15i
5i	-15i	-25i ²

Solve for x

$$3x^2 - x = -4$$

$$\begin{aligned} a &= 3 \\ b &= -1 \\ c &= 4 \end{aligned}$$

$$3x^2 - x + 4 = 0$$

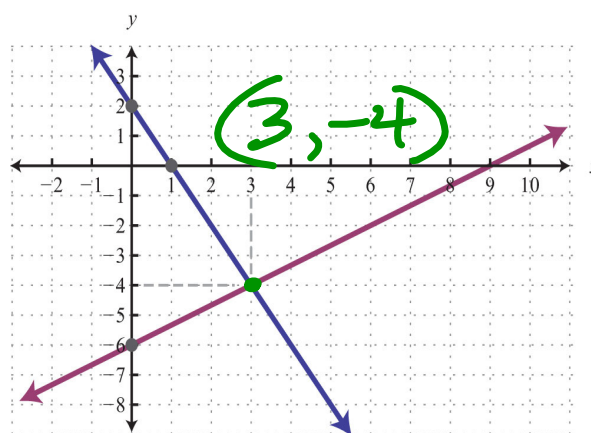
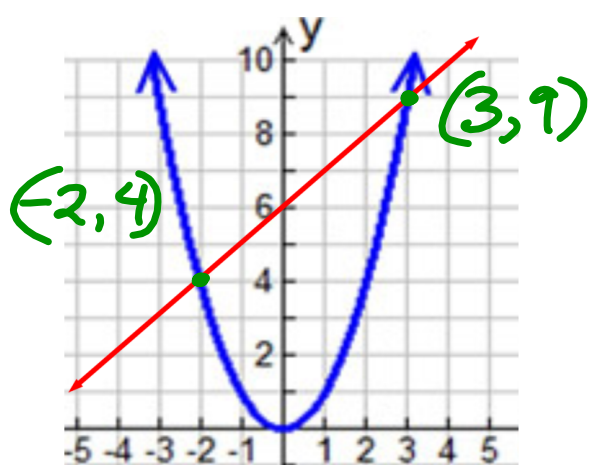
$$x = \frac{-(-1) \pm \sqrt{(-1)^2 - 4(3)(4)}}{2(3)} = \frac{1 \pm \sqrt{-47}}{6}$$

$$x = \frac{1 \pm i\sqrt{47}}{6}$$

$$\frac{1 + i\sqrt{47}}{6}$$

$$\frac{1 - i\sqrt{47}}{6}$$

State the solution(s) of each system of equations



Solve the system of equations

$$y = (-x)^2 + 10(x) + 3$$

$$(-1, -6)$$

$$(-4, -21)$$

"y" $y = -x^2 - 5$

$$x^2 + 10x + 3 = -x^2 - 5$$

$$2x^2 + 10x + 8 = 0$$

$$x^2 + 5x + 4 = 0$$

$$(x+1)(x+4) = 0$$

$$x+1=0$$

$$x = -1$$

$$x+4=0$$

$$x = -4$$

~~$$\begin{array}{r} +1 \\ +4 \\ +5 \end{array}$$~~

Solve the system of equations

$$\begin{aligned} y &= x^2 \\ y - 8 &= -x^2 + 8 \\ x^2 - 8 &= -x^2 + 8 \\ + x^2 &+ x^2 \\ 2x^2 - 8 &= 0 \\ + 8 &+ 8 \\ 2x^2 &= 8 \\ \frac{2}{2}x^2 &= \frac{8}{2} \\ \sqrt{x^2} &= \sqrt{4} \quad x = \pm 2 \end{aligned}$$

$(2, 4)$
 $(-2, 4)$

Hand out review and set up #s 14-17

Name: _____ Hr: _____

due tomorrow!

3E Standards Quiz Review**Write each expression in simplest form.**

1. $(4 - 2i) + (2 + 3i)$

2. $(2 - i) - (4 + 5i)$

3. $(2 - i)(6 + 5i)$

4. $(3 - 2i)(3 + 2i)$

Write each expression in simplest form.

5. $\sqrt{-100}$

6. $\sqrt{-48}$

Solve. Circle your solutions as well as show all work.

7. $x^2 - 7x = 8$

8. $2x^2 - x + 4 = 0$

9. $x^2 + 5 = -3x$

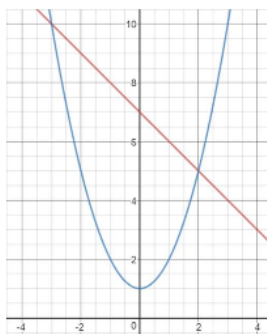
10. $3x^2 - 16 = -7$

11. $2x^2 + 10 = -18$

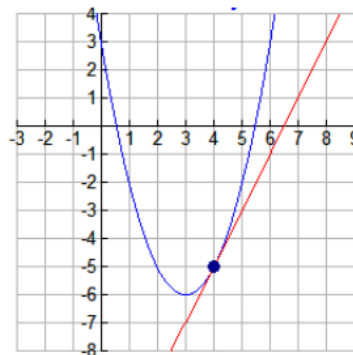
3F Standards Quiz Review.

Solve each system of equations.

12.
$$\begin{cases} y = -x + 7 \\ y = x^2 + 1 \end{cases}$$



13.
$$\begin{cases} y = x^2 - 6x + 3 \\ y = 2x - 13 \end{cases}$$



14.
$$\begin{cases} y = x^2 + 3x + 2 \\ -3x + y = 3 \end{cases}$$

15.
$$\begin{cases} y = x^2 \\ y - 8 = -x^2 \end{cases}$$

16.
$$\begin{cases} y = 12 - 6x \\ x^2 + y = 4 \end{cases}$$

17.
$$\begin{cases} x^2 + y^2 = 25 \\ x + y = 7 \end{cases}$$

