

Today's Plan:

Learning Target (standard): I will use the graphing calculators to solve quadratics systems.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.

NAME _____ #36

BELL RINGER

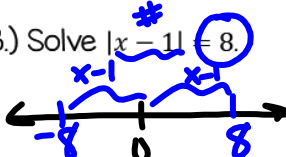
1.) Write an equation of the line that passes through the point (1, 7) and has a slope of 2 in slope-intercept form.

$y = mx + b$ $7 = 2 + b$ $y = 2x + 5$
 $7 = 2(1) + b$ $b = 5$

2.) Find the slope between the points (2, 5) and (6, -4).
 Find the slope of a line that is parallel and one that is perpendicular.

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-4 - 5}{6 - 2} = -\frac{9}{4}$ $m = -\frac{9}{4}$
 $m_{\parallel} = -\frac{9}{4}$

3.) Solve $|x - 1| = 8$.



$x - 1 = -8$ $x - 1 = 8$
 $x = -7$ $x = 9$

$x = -7, 9$

$m_{\perp} = \frac{4}{9}$

Evaluate.

$$f(x) = 2x^3 + 1 \quad g(x) = -x^2 - 3x + 2$$

$$-2g(-1) + 3f(2)$$

$$g(-1) = -(-1)^2 - 3(-1) + 2$$

$$= -1 + 3 + 2$$

$$g(-1) = 4$$

$$-2g(-1) = -2(4)$$

$$-2g(-1) = -8$$

$$f(2) = 2(2)^3 + 1$$

$$= 16 + 1$$

$$f(2) = 17$$

$$3f(2) = 3(17)$$

$$3f(2) = 51$$

$$-2g(-1) + 3f(2) = -8 + 51$$

$$-2g(-1) + 3f(2) = 43$$

Find the following:

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

$$g(x) = 3x^2 + x - 1$$

$$f(-2) \cdot g(3) =$$

$$f(-2) = -(-2)^2 + 2(-2) - 4$$

$$= -4 - 4 - 4$$

$$f(-2) = -12$$

$$g(3) = 3(3)^2 + 3 - 1$$

$$= 27 + 3 - 1$$

$$g(3) = 29$$

$$f(-2) \cdot g(3) = -12 \cdot 29$$

$$f(-2) \cdot g(3) = -348$$

Use DESMOS to graph with the 6-step process.

$$f(x) = -x^2 + 2x + 2$$

1) opens down \rightarrow maximum

2) vertex: $(1, 3)$

3) AOS: $x = 1$

4) I_x : $(-0.732, 0)$ and $(2.732, 0)$
 I_y : $(0, 2)$

5)

x	y
-1	-1
0	2
1	3
2	2
3	-1

Use the graphing method to solve the system:

$$x - 3y = 9$$

$$5x + 3y = 9$$

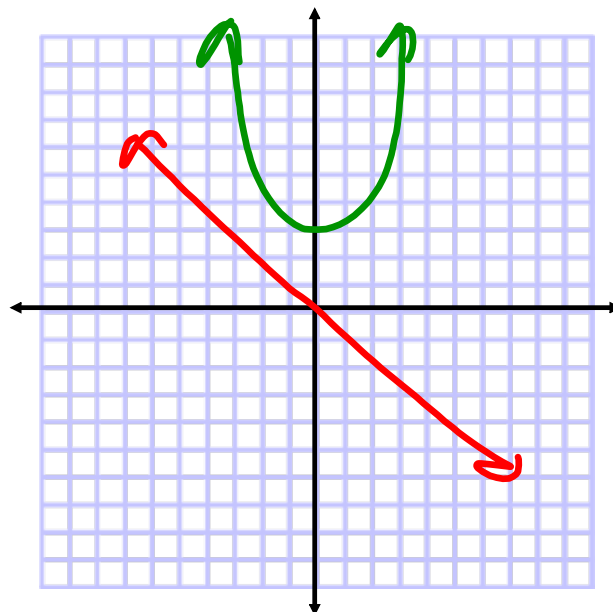
independent
 $(3, -2)$

Use the graphing method to solve the system:

$$2x^2 + 5x - 3y + 30 = 0$$

$$x + y - 3 = 0$$

NO solution

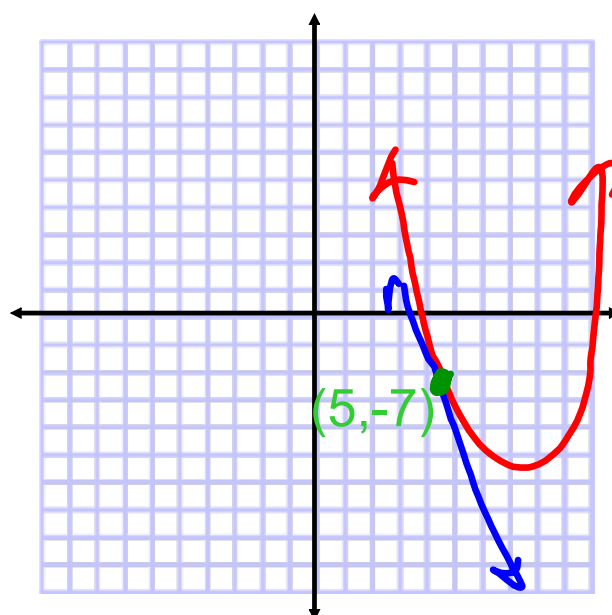


Use the graphing method to solve the system:

$$-x^2 + 12x + y - 28 = 0$$

$$2x + y = 3$$

One solution

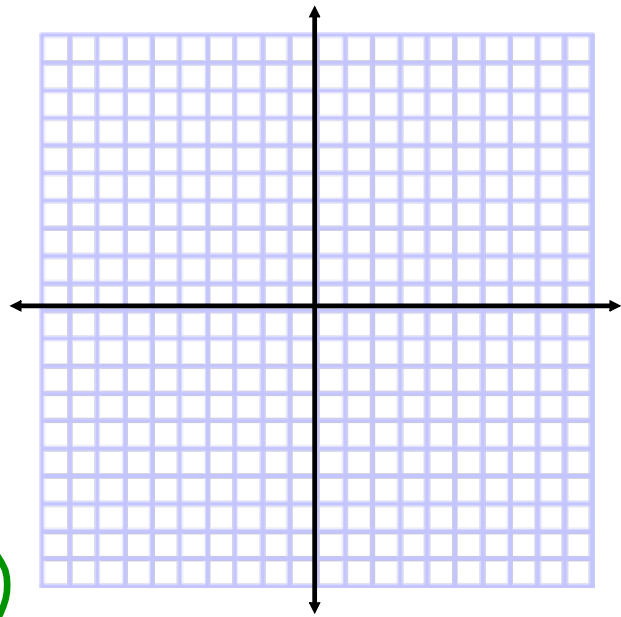


Graph.

$$y < x - 2$$

1) dotted - $<, >$
 solid - \leq, \geq

2) shading:
 above ($>, \geq$)
 below ($\leq, <$)



Graph.

$$y < x - 2$$

$$m = 1$$

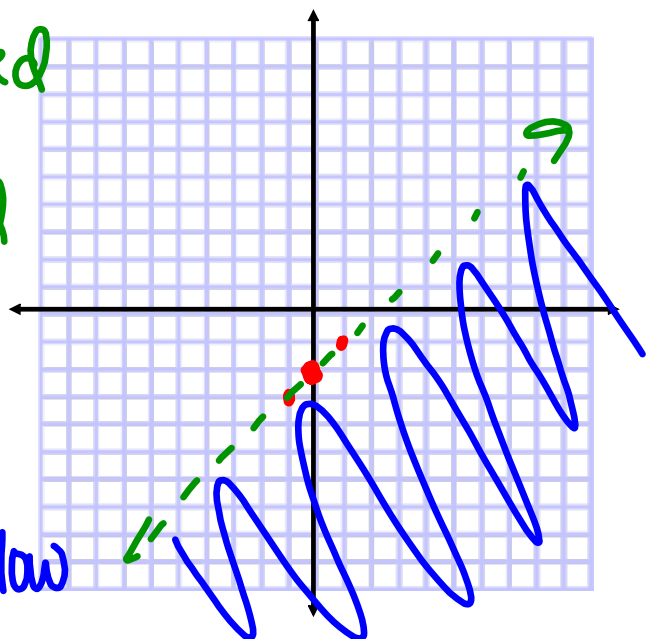
$$I_y: (0, -2)$$

\leq dotted

\geq solid

\leq shade below

\geq shade above



Quadratic Inequalities on Calculator:

$$y \leq x^2 + 3$$

