

Today's Plan:

Learning Target (standard): I will use the graphing calculators to solve quadratic 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, and take a quiz using DESMOS on quadratic functions.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide quiz problems.

Assessment: Board work, homework check and quiz

Differentiation: Students will work at the board, go over and correct homework at their seats, and actively engage in quiz problems.

NAME _____

#134

$$y = mx + b$$

BELL RINGER

$$y = -3x + 7$$

1.) Write an equation in slope-intercept form of the line that has a slope of -3 and y-intercept is 7 .

m

$$Iy: (0, 7) \rightarrow (0, b)$$

2.) Evaluate $f(x) = -x + 6$ when $x = -2$.

$$f(-2) = -(-2) + 6$$

$$= 2 + 6$$

$$f(-2) = 8$$

3.) Is the relation $\{(-1, 2), (3, 5), (4, 2), (5, -1)\}$ a function? Explain your answer.

Function - every x-value has only one y-value.

Graph by hand.

$$f(x) = x^2 - 10x + 24$$

1) opens up \rightarrow minimum

2) vertex: $(5, -1)$
 $x = -\frac{b}{2a} = \frac{10}{2(1)} = \frac{10}{2} = 5$
 $f(5) = (5)^2 - 10(5) + 24$
 $= 25 - 50 + 24$
 $f(5) = -1$

3) AOS: $x = 5$

4) $I_x: (4, 0), (6, 0)$

$$x^2 - 10x + 24 = 0$$

$$x^2 - 6x - 4x + 24 = 0$$

$$x(x-6) - 4(x-6) = 0$$

$$(x-6)(x-4) = 0$$

$$x = 6, 4$$

5)

x	y
3	3
4	0
5	-1
6	0
7	3

 $f(3) = (3)^2 - 10(3) + 24$
 $= 9 - 30 + 24$
 $f(3) = 3$

$$x^2 - 10x + 25 = -24 + 25$$

$$(x-5)^2 = 1$$

$$x-5 = 1, -1$$

$$x = 6, 4$$

Evaluate.

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

$$g(x) = -4x + 3$$

$3g(-3) - 2f(4)$

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

$$= 32 - 4 + 2$$

$$f(4) = 30$$

$$2f(4) = 2(30)$$

$$2f(4) = 60$$

$$g(-3) = -4(-3) + 3$$

$$= 12 + 3$$

$$g(-3) = 15$$

$$3g(-3) = 3(15)$$

$$3g(-3) = 45$$

$$3g(-3) - 2f(4) = 45 - 60$$

$$3g(-3) - 2f(4) = -15$$