GRAPH THE FOLLOWING

1. $y = -(3/2)x + 4$
2. $3x - 4y = 8$
3. $y = x^2 - x - 20$
4. $y = -2(x - 3)^2 + 4$
5. $y = (x - 4)(x + 3)$

LEARNING GOALS

- SWBAT graph quadratic functions in vertex, standard, and intercept form.

- SWBAT solve applications of quadratic functions.

CLASS AGENDA

- Review graphing equations
- Practice graphing
- Break
- Activity: Solving Equations
- Activity: Solving Inequalities
- Closure
- Quiz on Summer Packet is on Wed.

HOW DO WE GRAPH

- Table of values
- Find the intercept(s)
- Find the vertex
- Use the information from the given form

GRAPH THE FOLLOWING

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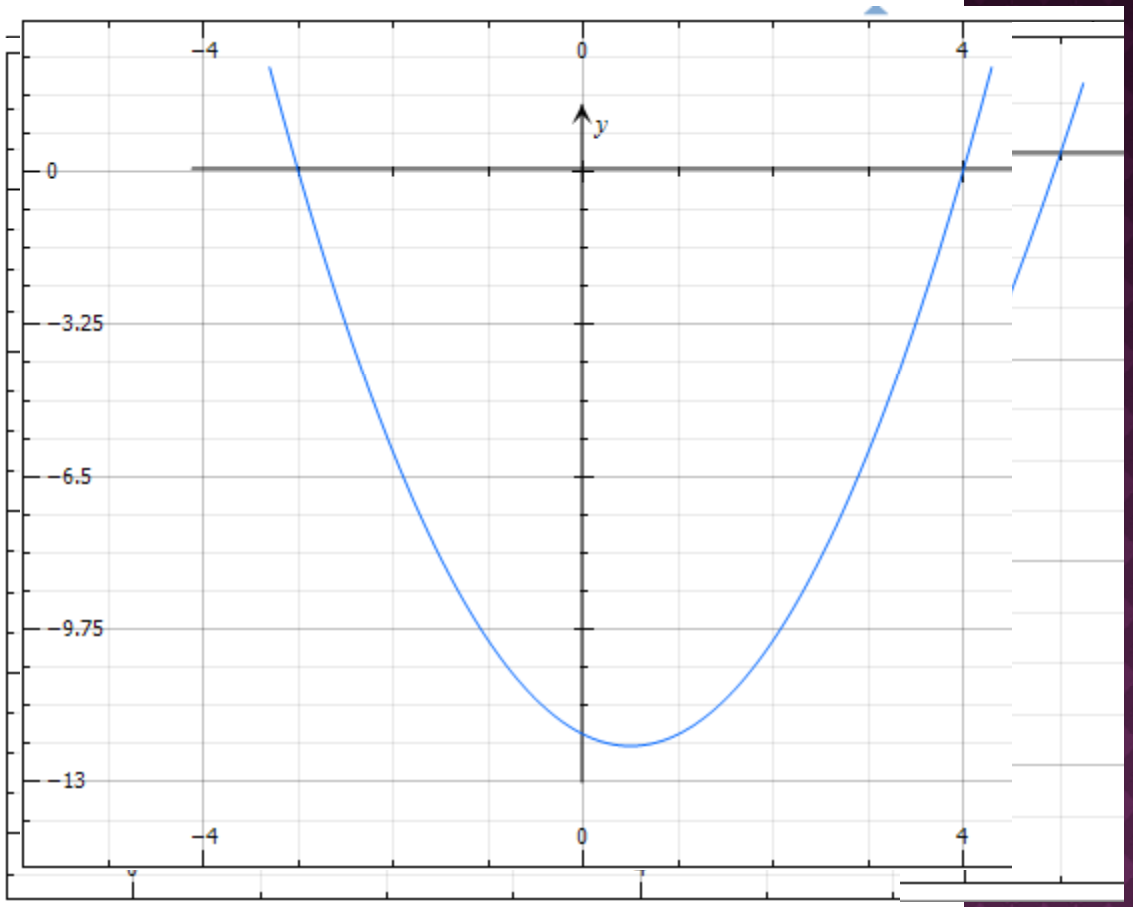

MORE PRACTICE

- A student goes shopping every week. He has $1200 in his account and spends an average of $75 a week. Graph the equation represented by this problem.

  - What are your variables?
  - What is the equation?
  - What does the y-intercept represent in this problem?
  - What does the x-intercept represent in this problem?

MORE PRACTICE

- A model rocket is launched from the ground and follows the trajectory modeled by the equation $y = x^2 + 12x + 36$; where "y" is the lateral distance and "x" is time in seconds.
  - What are your variables?
  - What is the equation?
  - What is the vertex?
  - What does the vertex represent in this problem?
  - What do the x-intercepts represent in this problem?

BREAK

Solving Equations

PARTNER ACTIVITY

SOLVE THE FOLLOWING

1. $2x + 4 = 16$

2. $\frac{3x}{2} - 8 = 13$

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

4. $2(x - 3) = x + 6$

5. $-3(x - 2) + 4 = 6x - 3$

6. $x^2 = 625$

7. $x^2 - 64 = 0$

8. $x^2 - 6x + 5 = 0$

9. $x^2 = -8 - 6x$

10. $x^2 = 2\left(x + \frac{1}{2}\right)$

Solving Inequalities

PARTNER ACTIVITY

SOLVE THE FOLLOWING AND GRAPH THE SOLUTION

1. $x - 3 > 4$
2. $2x + 4 \leq 8$
3. $2(x - 3) \geq 12$
4. $3(4 - x) < 24$
5. $x - 4 \leq 2x - 8$
6. $9 - 2x > 3(x - 2)$
7. $\frac{2}{3}x - 1 \geq \frac{3}{2}x + 2$
8. $\frac{3}{4}x + \frac{3}{2} < \frac{x}{4}$

CLOSURE

CLOSURE

- How many points do you need to graph
  - A linear equation?
  - A quadratic equation?
- What does the axis of symmetry allow me to do with plotting points?
- Where is the vertex of a quadratic equation?
- How many solutions do I have
  - For a linear equation?
  - For a quadratic equation?

HOMEWORK

- Quiz on Summer Packet will be on Wednesday, September 18th. STUDY!