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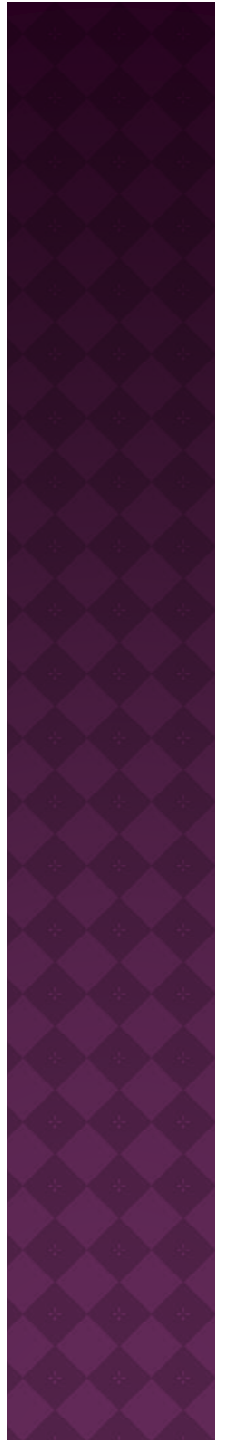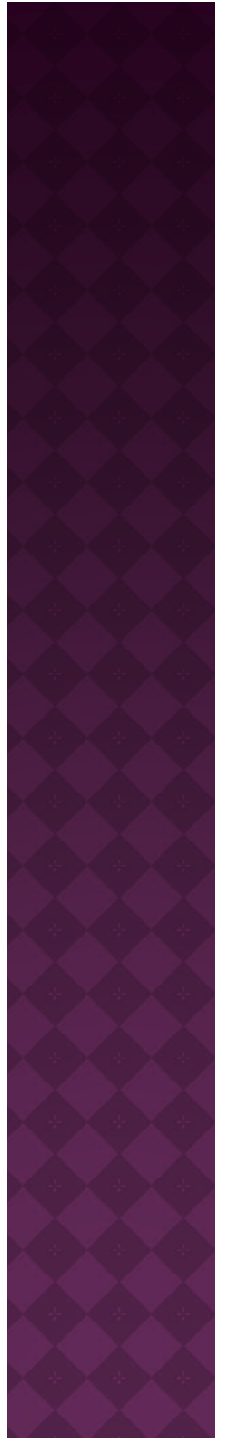
- SWBAT graph quadratic functions in vertex, standard, and intercept form.

- SWBAT solve applications of quadratic functions.

CLASS AGENDA

- Review of Summer Packet
- Break
- Activity: Graphing Quadratics
- Break
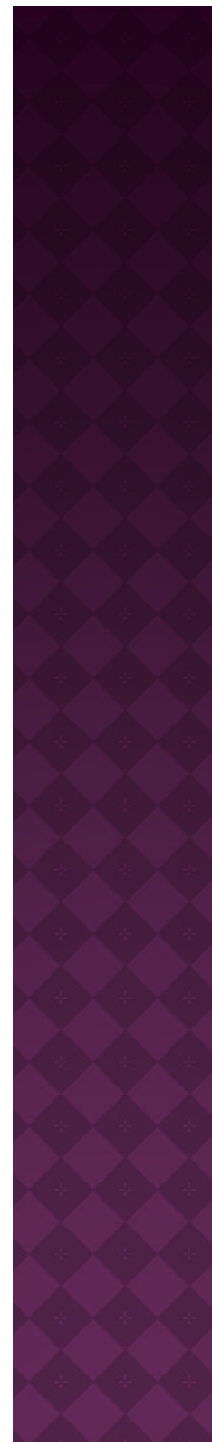- Practice
- Closure

Any questions?

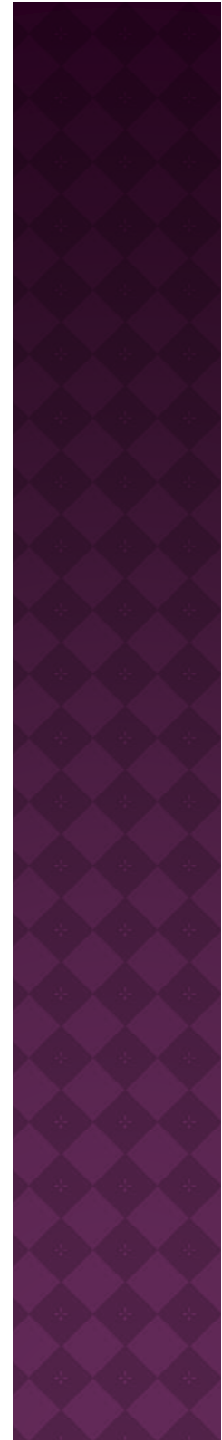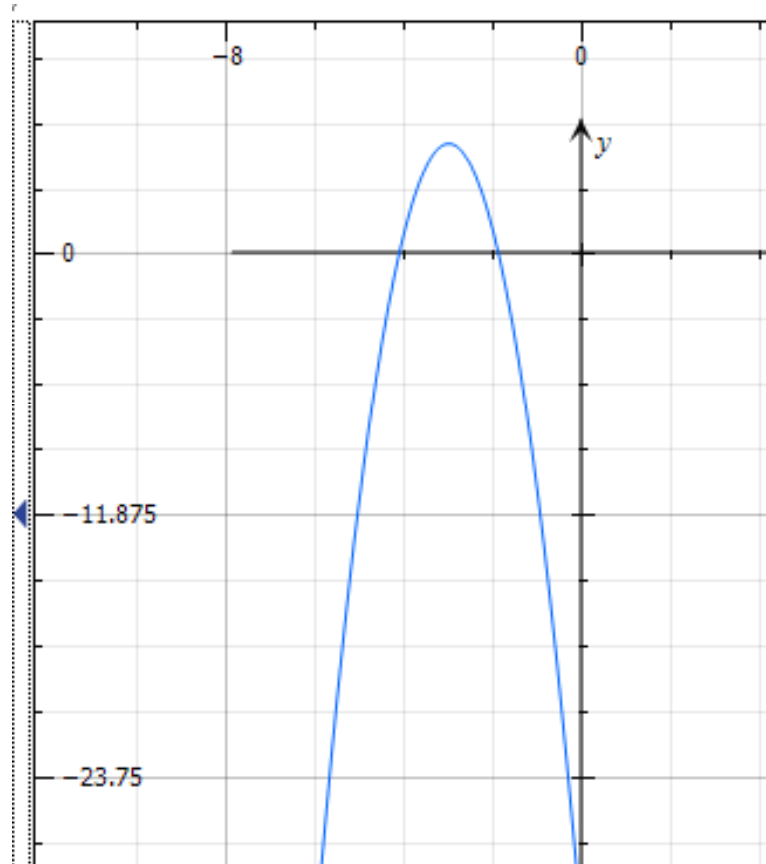# REVIEW SUMMER PACKET

BREAK

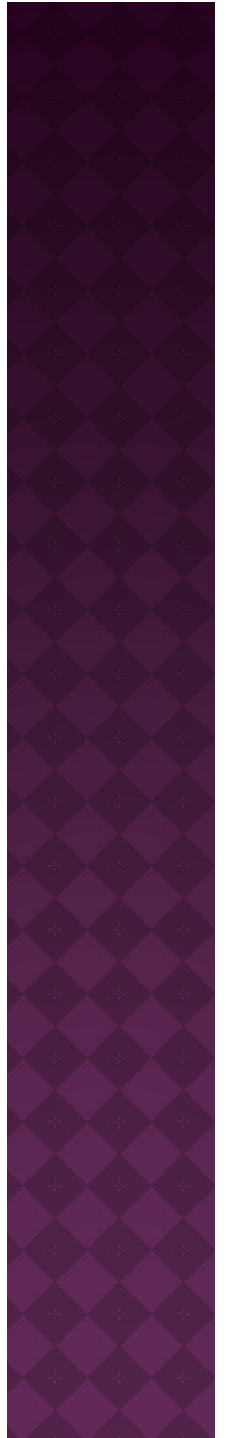Graphing Quadratic Equations

ACTIVITY

GRAPH THE FOLLOWING

- $y = x^2 + 8x - 8$

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

ERROR ANALYSIS

- A classmate said that the vertex of
y = -5(x+2)^2 – 6 is (2,6).

- What mistake did your classmate make?
- What is the correct vertex?

REAL WORLD PROBLEM
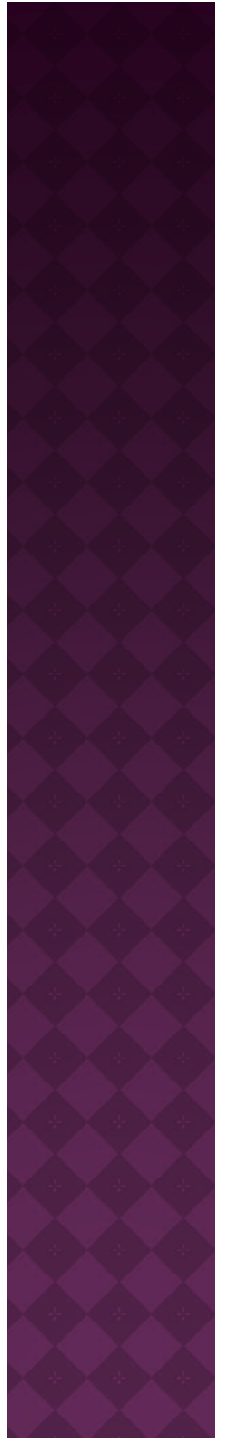
- A soccer ball is kicked by a player is modeled by the equation: $y = 2x^2 + 12x - 10$

- What is the vertex?

- Where is it located on the parabola?

- Why does this make sense in terms of physics?

- Plot the graph. Estimate the x-intercepts

- What do you think they represent in the context of the problem?

BREAK

Sit back down with a textbook

PRACTICE

- Turn to page 41
- With your partner:
- Complete problems 1-8
  - Find the x and y intercepts
  - Find the axis of symmetry
  - Find the vertex
- Complete problems 9-14
  - Find the vertex by completing the square and putting in vertex form
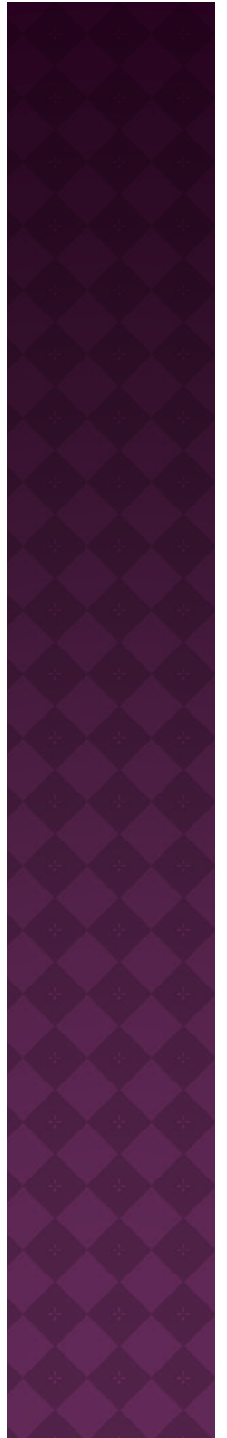 - Find the x and y intercepts

CLOSURE

CLOSURE

- Identify the form:
  - $y = 3x^2 + 4x + 5$

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

  - $y = -2(x + 3)^2 + 20$

- What is the vertex of each?

HOMEWORK

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