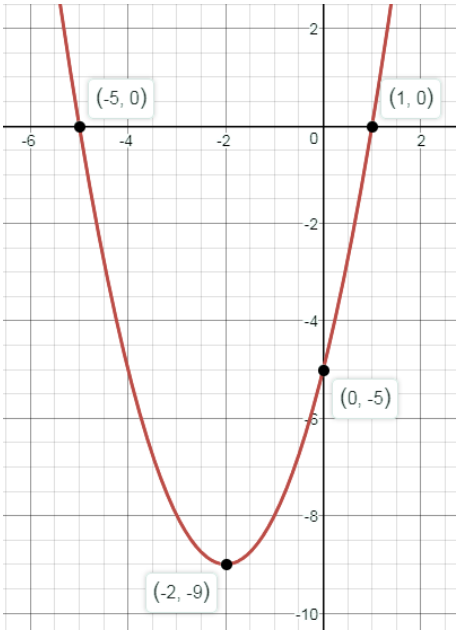
Algebra 1: Graphing Quadratics **Name** _____ **PD** _____
OPEN NOTES Pop Quiz

Use the graph of the quadratic function to answer the following questions. <u>Write explanations in complete sentences.</u>



1. What is the vertex of the parabola?

2. Is the vertex a maximum or minimum? Explain.

3. What is the axis of symmetry for the parabola?

4. What is the *y*–intercept of the parabola?

5. What are the zeros or *x*-intercepts of the parabola?

6. Is the value of '*a*' positive or negative? How do you know?

7. Is the value of '*c*' positive or negative? How do you know?

Use your notes to answer each of the following questions about quadratic functions. <u>Write explanations in complete sentences.</u>

8. What is the definition of a quadratic function?

9. What is the quadratic parent function?

10. What is the standard form for a quadratic function?

11. What are 2 – 3 things the '*a*' value does to the parabola of a quadratic function?

12. When a quadratic function is written in standard form what does the '*b*' value do to the parabola?

13. What is the formula for the axis of symmetry when a quadratic is written in standard form?

14. What is the vertex form for a quadratic function?

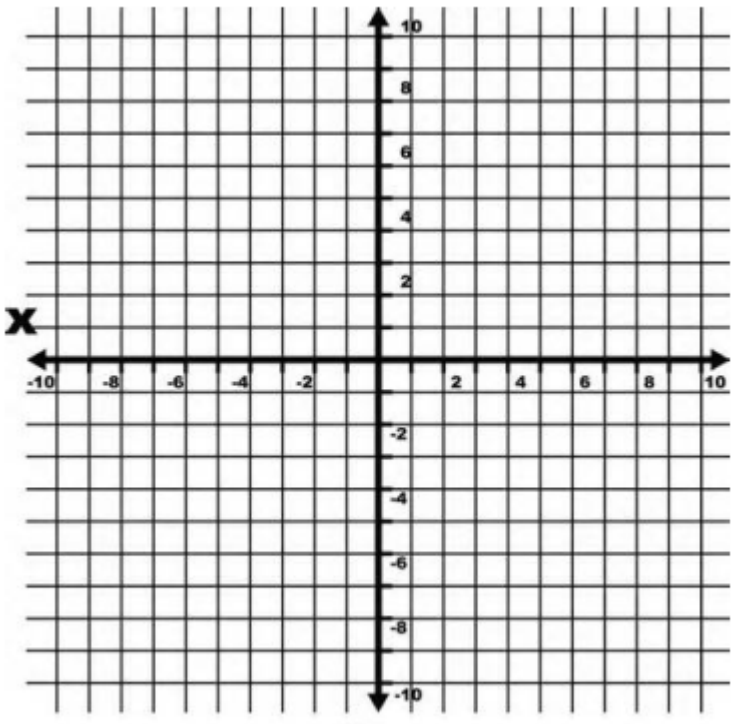
15. What does the '*h*' value represent in the vertex form of a quadratic function? How does the expression $(x \pm h)$ affect the parabola?

16. What does the '*k*' value represent in the vertex form of a quadratic function? How does the '*k*' value affect the parabola?

Complete the table for each quadratic function and graph the parabola.

17. $y = x^2 - 2x - 3$

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



18. $y = (x + 2)^2 - 4$

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