

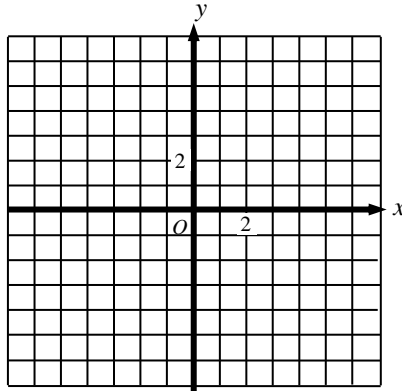
Quadratics
Test Review

Name _____
Period _____

Complete the table and identify the parts of the quadratic function.

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

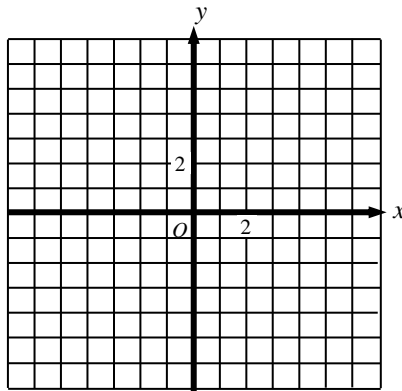
x	$y = -x^2 + 2x + 8$
-2	
-1	
0	
1	
2	



2. What is the vertex?
3. Is it a maximum or minimum point?
4. What are the roots of the function?
5. What is the line of symmetry?
6. What is the domain of the function?
7. What is the range of the function?

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

x	$y = 2x^2 - 8$
-2	
-1	
0	
1	
2	



9. What is the vertex?
10. Is it a maximum or minimum point?
11. What are the roots of the function?
12. What is the line of symmetry?
13. What is the domain of the function?
14. What is the range of the function?

A signal flare is fired upward with an initial speed of 245 meters per second. A stationary balloonist at a height of 1960 meters sees the flare on its way up. How long after this will the flare pass the balloonist again on the way down? Use the formula, $h = -4.9t^2 + 245t + 1960$.

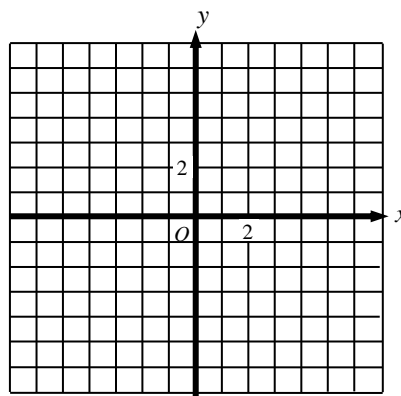
- 15. What is the starting height? _____
- 16. How long was the flare at least 3920 meters above the ground? _____
- 17. What is the maximum height of the flare? _____
- 18. How long did it take to reach the maximum height? _____
- 19. How long was the flare in the air? _____

20. Given the equation $y = 2x^2 - 7$. Write the equation for a quadratic if the graph is reflected and translated 5 units up.

21. Write an equation for a quadratic that will open upward and be narrower than the graph of $y = -3x^2$?

22. Write the quadratic equation if the function $y = 3x^2 + 6$ has become wider, been reflected across the x-axis and shift two units down? (A.9.B, A.9.C)

23. Between which 2 negative integers will the graph of $y = \frac{1}{3}(x + 4)^2 - 6$ cross the x-axis? (A.10.A)



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Find the solutions or roots to the quadratic equations by factoring or using the quadratic formula.

24. $3x^2 + 2x + 3 = 4$

25. $4x^2 = 12x - 9$

26. $x^2 - 6x + 14 = 0$

27. $2x^2 - 5x + 9 = 0$