Name_____ Date _____

8.4 Puzzle Time

How Do You Make Sure You Pass A Geometry Test?

Write the letter of each answer in the box containing the exercise number.

Determine whether the function is *even*, *odd*, or *neither*.

1. $f(x) = 5x^2 + 2$

2. $c(x) = -\frac{3}{4}x$

3. $g(x) = 6x - 9$

Find the vertex and the axis of symmetry of the graph of the function.

4. $d(x) = 4(x + 2)^2$

5. $r(x) = -7(x + 5)^2 - 6$

6. $h(x) = 2(x - 8)^2 + 12$

7. $s(x) = -9(x - 3)^2 + 7$

Compare the graph of the function to the graph of $f(x) = x^2$.

8. $b(x) = 3(x + 4)^2$

9. $w(x) = -(x - 1)^2 - 9$

10. $k(x) = \frac{1}{8}(x - 6)^2$

11. $m(x) = (x + 7)^2 + 10$

Write a quadratic function in vertex form whose graph has the given vertex and passes through the given point.

12. vertex: $(-4, -2)$; passes through $(-7, 7)$

13. vertex: $(2, 3)$; passes through $(4, 11)$

14. vertex: $(-4, 6)$; passes through $(0, -26)$

15. vertex: $(8, 1)$; passes through $(10, 13)$

16. A portion of a ski slope in the shape of a parabola has a vertex of $(45, 125)$ and passes through the point $(70, 0)$.

Answers

A. odd

G. even

W. neither

E. $(8, 12)$; $x = 8$

S. $(-2, 0)$; $x = -2$

A. $(3, 7)$; $x = 3$

L. $(-5, -6)$; $x = -5$

K. $f(x) = 2(x - 2)^2 + 3$

L. $f(x) = -\frac{1}{5}(x - 45)^2 + 125$

H. $f(x) = (x + 4)^2 - 2$

O. $f(x) = 3(x - 8)^2 + 1$

N. $f(x) = -2(x + 4)^2 + 6$

T. reflection in the x-axis, translation 1 unit right and 9 units down

N. translation 7 units left and 10 units up

L. translation 4 units left, and a vertical stretch by a factor of 3

E. translation 6 units right, and a vertical shrink by a factor of $\frac{1}{8}$

13	11	15	3		2	16	5		9	12	6		7	14	1	8	10	4