

## Functions and Graphing

### Review for Quiz

Determine the independent variable and dependent variable for the situation below.

1. Between June and December, as distance from the equator increases, the hours of daylight decrease.

Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

Determine the domain and range for each function below:

2.  $f(x) = \sqrt{x^2 - 16}$

3.  $f(x) = \frac{x-3}{x^2-36}$

Given  $f(x) = 3x^2 - 6x$ , find each value.

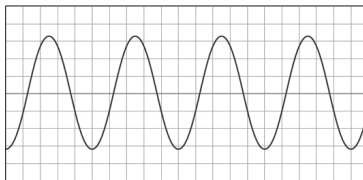
4.  $f(4)$

5.  $f(h+3)$

State whether the relations below are functions.

6.  $\{(1, 5), (2, 10), (3, 20)\}$

7.



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

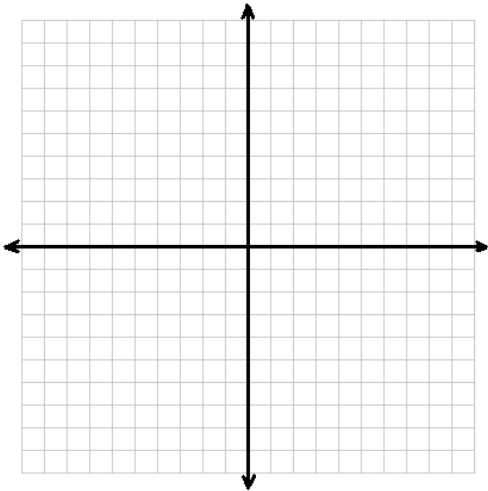
Determine whether each function is an even function, an odd function, or neither.

9.  $y = \sqrt{2x^2 - 49}$

10.  $y = -3x^5 + 2x^3 - x$

Sketch each graph and its parent on the same set of axes. Write an equation for the parent graph and a rule for the translation. (Use tables!)

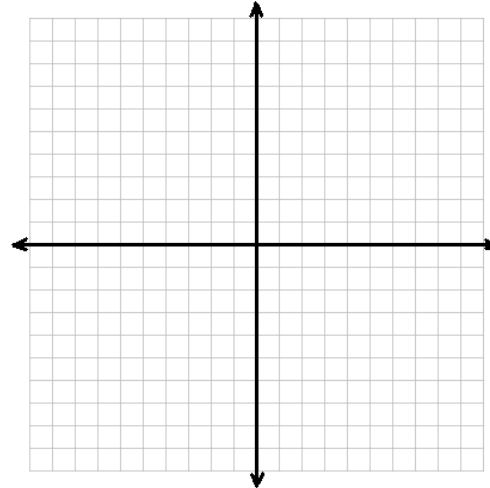
11.  $f(x) = x^2 + 3$



$T(x, y) = ( \quad , \quad )$

Equation of Parent Graph: \_\_\_\_\_

12.  $f(x) = \frac{1}{x-3} + 5$

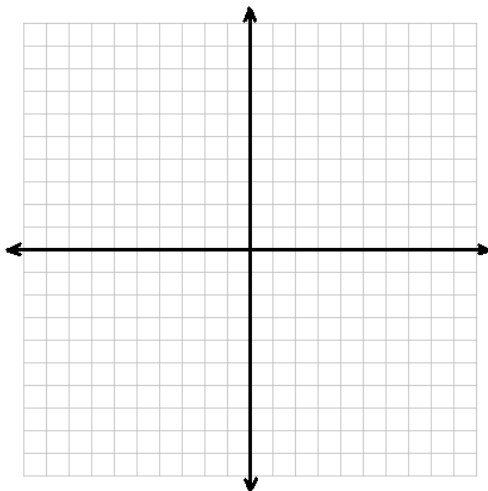


$T(x, y) = ( \quad , \quad )$

Equation of Parent Graph: \_\_\_\_\_

Graph each equation and determine whether the graph is symmetric with respect to the x-axis, the y-axis, or the origin.

13.  $y = \pm\sqrt{x+8}$



14.  $y^2 = -x^2 + 9$

