**Reviewing the Basics of a Quadratic Function**

1. Where is the vertex of the graph of each of the quadratic functions?

a)  b) 

2. Does the graph of the function open up or down?

a)  b) 

3. Order the graphs of the functions from narrowest to widest.

A.  B. 

C.  D. 

4. Rewrite each quadratic function equation from vertex form into standard form.

a)  b) 

5. Given the quadratic function , graph the parabola using the vertex, axis of symmetry and two other points on the graph.

|  |  |  |
| --- | --- | --- |
|  | *x*-coordinate | *y*-coordinate |
| Vertex |  |  |
| First point |  |  |
| Second point |  |  |

6. Fill in the blanks below to compare the graph of  to the parent graph .

Vertical translation of \_\_\_\_\_\_\_\_\_\_\_units \_\_\_\_\_\_\_\_\_\_\_\_\_.

Horizontal translation of \_\_\_\_\_\_\_\_\_\_\_units \_\_\_\_\_\_\_\_\_\_\_\_\_.

Vertex \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Direction of Opening \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Equation of the Axis of Symmetry\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Fill in the blanks below to compare the graph of  to the parent graph .

Vertical translation of \_\_\_\_\_\_\_\_\_\_\_units \_\_\_\_\_\_\_\_\_\_\_\_\_.

Horizontal translation of \_\_\_\_\_\_\_\_\_\_\_units \_\_\_\_\_\_\_\_\_\_\_\_\_.

Vertex \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Direction of Opening \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Equation of the Axis of Symmetry\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Fill in the table by comparing each transformed function to the parent graph ****

|  |  |  |
| --- | --- | --- |
| Transformed Function | Vertical or Horizontal Translation | Number of Units and direction |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

9. Write the equation of a quadratic function with a vertex at (4, -2) and passes through the point (8, 6) in vertex form. Rewrite the equation in standard form.