

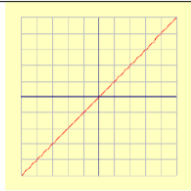
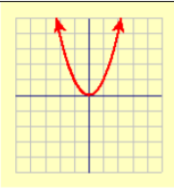


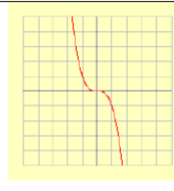
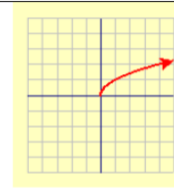
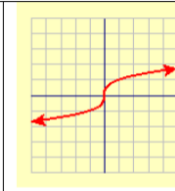
## Objective 07 HW

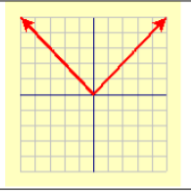
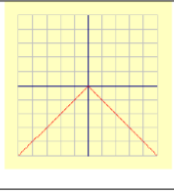
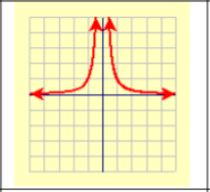

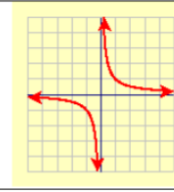
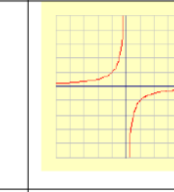
**Describe functions, their domains, ranges, intervals on which they are increasing / decreasing / constant and be able to recognize and graph function of various types on the Cartesian plane.**

Answer the following questions.	Answers
What is a function?	
What is a characteristic of domain compared to range in a function?	
What are the characteristics of a function for the values of $y$ or $f(x)$ in a increasing, decreasing, and constant function?	

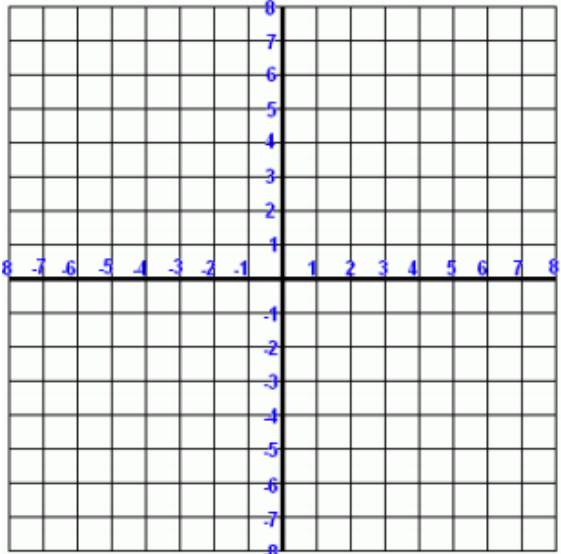
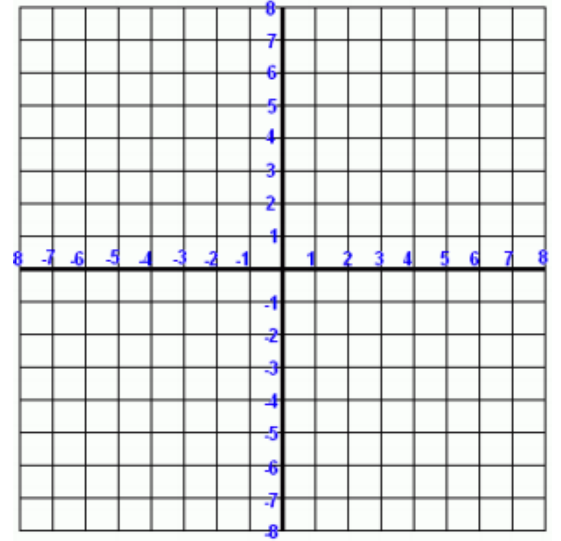
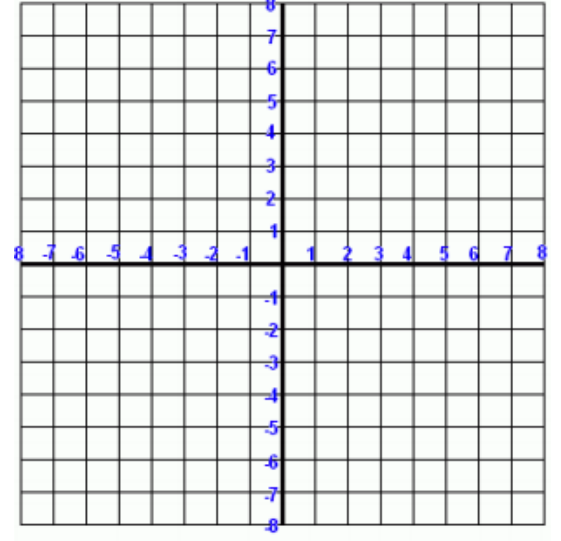
Identify the graphs below to their perspective function name.

Quadratic Equations and other common functions

Using the vertex form of the equation for the parabola apply the following transformations and give the final equation using the vertex form of the equation  $F(x) = (x-h)^2 + k$

<p><b>Graph a regular parabola. <math>F(x) = ?</math> _____</b></p> <p>What is the vertex?</p> <p>What is the domain {interval notation}?</p> <p>What is the range {interval notation}?</p> <p>What is the axis symmetry?</p> <p>What type of symmetry does it have?</p> <p>What are the x and y intercepts?</p>	
<p><b>A parabola has shifted up 2 units. <math>F(x) = ?</math> _____</b></p> <p>What is the vertex?</p> <p>What is the domain {interval notation}?</p> <p>What is the range {interval notation}?</p> <p>What is the axis symmetry?</p> <p>What type of symmetry does it have?</p> <p>What are the x and y intercepts?</p>	
<p><b>A parabola has shifted down 3 units. <math>F(x) = ?</math> _____</b></p> <p>What is the vertex?</p> <p>What is the domain {interval notation}?</p> <p>What is the range {interval notation}?</p> <p>What is the axis symmetry?</p> <p>What type of symmetry does it have?</p> <p>What are the x and y intercepts?</p>	

**A parabola has moved the left 2 units.**

**$F(x) = ?$**  \_\_\_\_\_

What is the vertex?

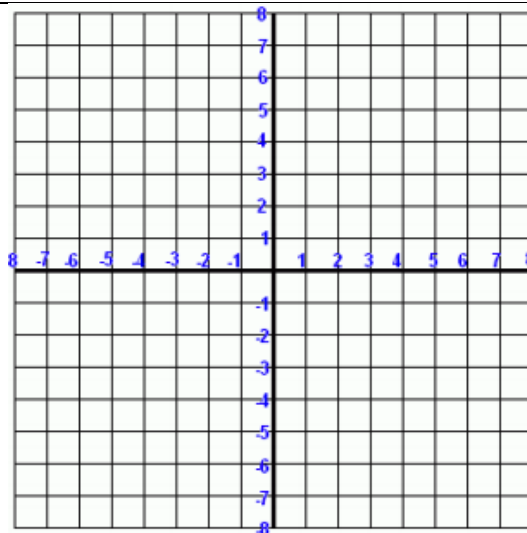
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**A parabola has shifted to the right 3 units**

**$F(x) = ?$**  \_\_\_\_\_

What is the vertex?

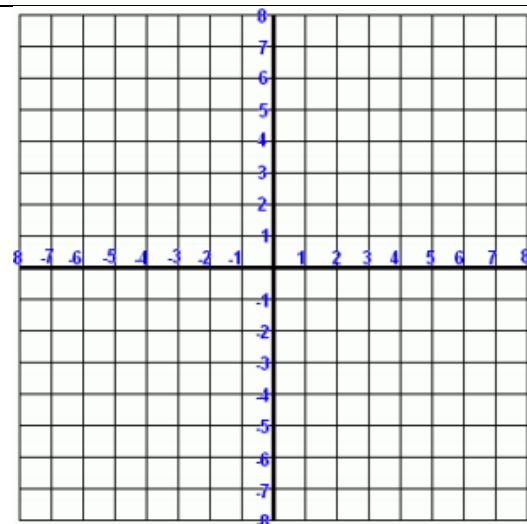
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**A parabola has shifted to the left 2 units and up 2 units.  $F(x) = ?$**  \_\_\_\_\_

What is the vertex?

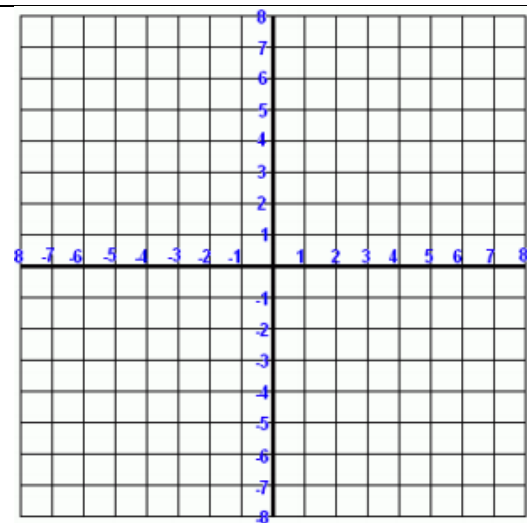
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**A parabola has shifted to the right 3 units down 3 units  $F(x) = ?$  \_\_\_\_\_**

What is the vertex?

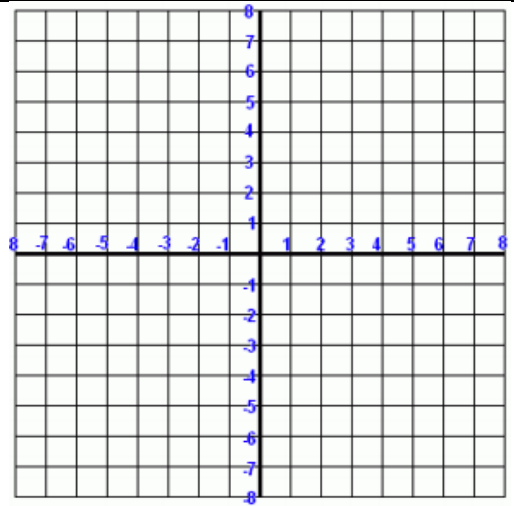
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**A parabola has reflected over the x axis  $F(x) = ?$  \_\_\_\_\_**

What is the vertex?

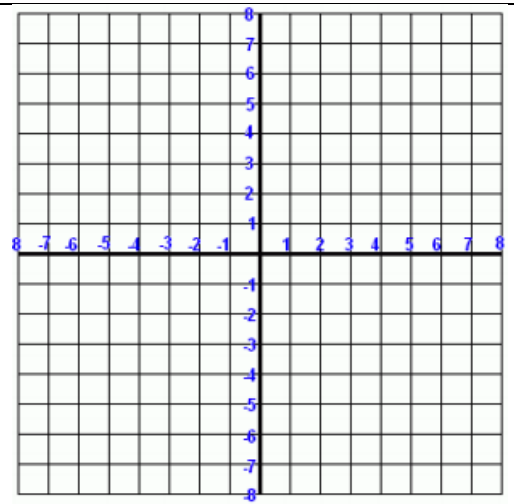
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**A parabola has reflected over the x axis and moved 2 units up and 2 units to the left  $F(x) = ?$  \_\_\_\_\_**

What is the vertex?

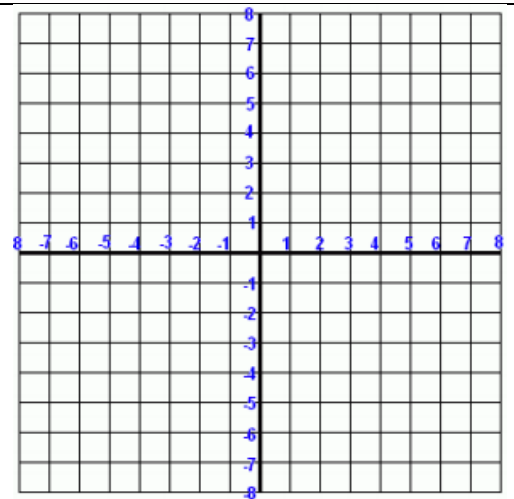
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**A parabola has reflected over the x axis and moved 2 units down and 3 units to the right**  
 **$F(x) = ?$  \_\_\_\_\_**

What is the vertex?

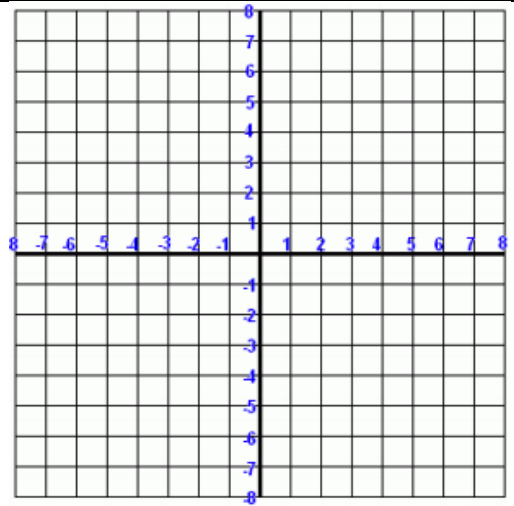
What is the domain {interval notation}?

What is the range {interval notation}?

What is the axis symmetry?

What type of symmetry does it have?

What are the x and y intercepts?



**Graph both a parabola  $f(x) = x^2$  and the equation  $f(x) = x$**

What is the vertex for parabola?

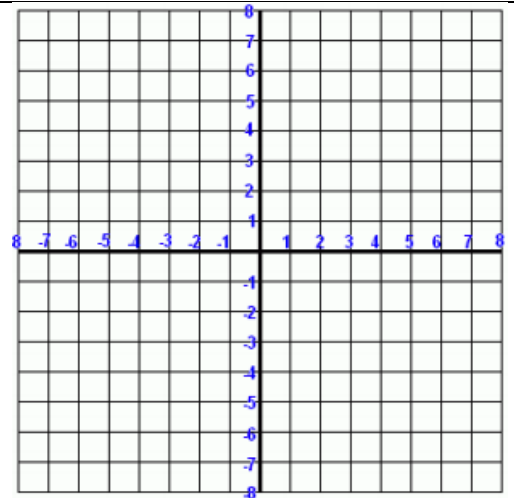
What is the domain {interval notation} for both?

What is the range {interval notation} for both?

What is the axis symmetry for parabola?

What type of symmetry does it have for parabola?

What are the x and y intercepts for both?



**Graph both a parabola  $f(x) = -x^2$  and the equation  $f(x) = -x$**

What is the vertex for parabola?

What is the domain {interval notation} for both?

What is the range {interval notation} for both?

What is the axis symmetry for parabola?

What type of symmetry does it have for parabola?

What are the x and y intercepts for both?

