Quadratic Function Model

Introduction

_____ function, which graphs as a _____, has _____.

Format #1:

Format #2:

where

caveat:

Parabola Orientation

domain:

Quadratic Format #1

Vertex

To find the _____ of the _____, use _____.

Then to find its _____, plug the _____ back into the _____.

On a _____, the _____ is an _____.

Intercepts

Since a _____ is a _____, it will have _____.

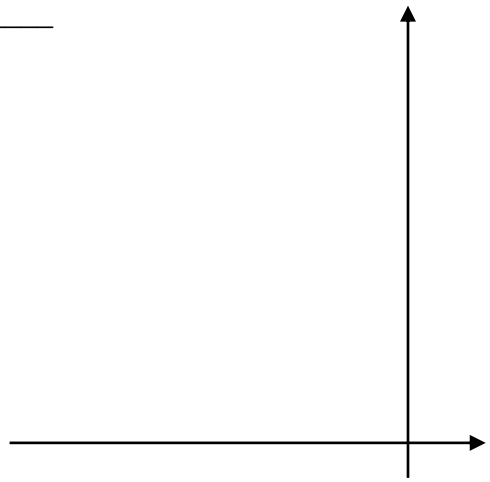
Expect it to have _____.

ex. Identify the _____ of _____

vertex *x*-value:

vertex *y*-value:

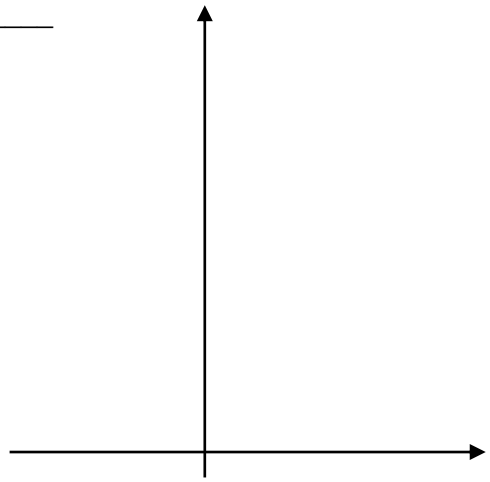
y-intercept:



x-intercept:

range:

ex. Identify the _____ of _____



vertex *x*-value:

vertex *y*-value:

y-intercept:

x-intercept:

range:

Quadratic Formula

A _____doesn't always _____ nicely into _____ or _____.

_____ can ALWAYS be used to determine _____, if any.

Quadratic Formula

ex. Use Quadratic Formula to determine _____ of _____.

ex. Use Quadratic Formula to show there are _____ on _____.

Quadratic Format #2

Vertex

ex. Identify the _____ of _____

vertex:

y-intercept:

x-intercept:

Application of the Vertex

Recall that the _____ of the _____ determines if

the _____ opens _____.

ex. Given _____,

does the function have a maximum or a minimum? How do you know?

When does it reach the maximum or minimum?

What is the maximum or minimum *value*?