

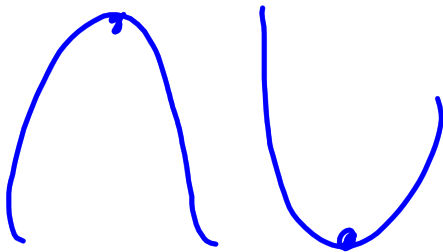
QUADRATICS

parabola

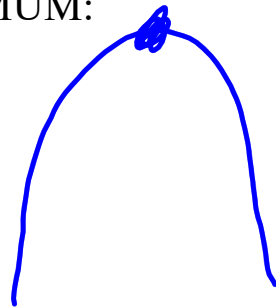
STANDARD FORM	VERTEX FORM
$f(x) = ax^2 + bx + c$	$f(x) = a (bx - h)^2 + k$
ROOTS(FACTOR), AXIS OF SYM, & MIN/MAX	VERTEX, TRANSFORMATION, & AXIS OF SYM.

QUADRATIC VOCAB

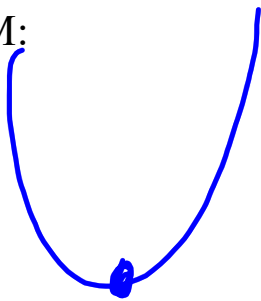
VERTEX:



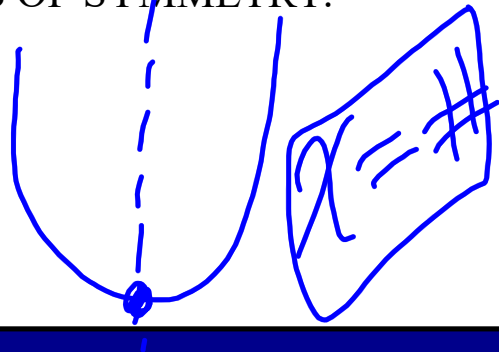
MAXIMUM:



MINIMUM:



AXIS OF SYMMETRY:

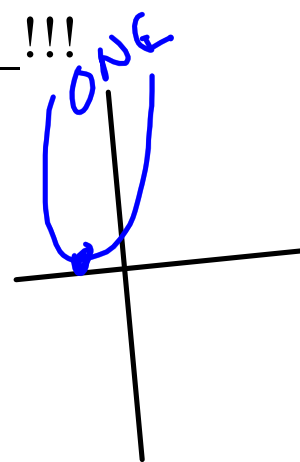
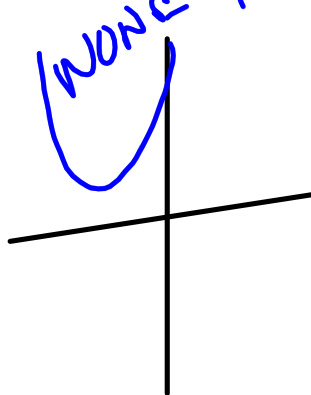
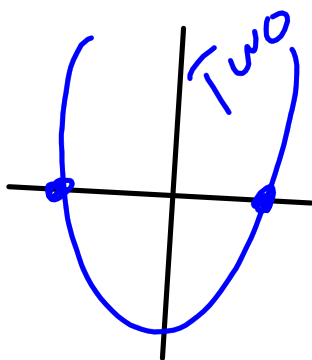


QUADRATIC VOCAB

Zeros, roots, solutions

ALL MEAN THE SAME THING

x - intercepts !!!



CALCULATOR TIP

GRAPH TRACE: (5) (1)
Menu -> Trace -> Graph
Trace

**WILL SHOW YOU EVERYTHING
THERE IS TO KNOW ABOUT A
QUADRATIC**

EXAMPLE

Which statement about $k(x) = -x^2 - 2x + 15$ is true?

- F** The zeros are -3 and 5 , because $k(x) = -(x + 3)(x - 5)$.
- G** The zeros are -5 and 3 , because $k(x) = -(x + 5)(x - 3)$.
- H** The zeros are -5 and -3 , because $k(x) = -(x + 5)(x + 3)$.
- J** The zeros are 3 and 5 , because $k(x) = -(x - 3)(x - 5)$.

Hint

$-5, 3$

EXAMPLE

What is the vertex of the graph of the quadratic function $f(x) = x^2 + 6x + 10$?

F (3, -1)

G (-3, -1)

H (-3, 1)

J (3, 1)

$$x = -\frac{b}{2a}$$