

Calculator Instructions

Do this every time you get the calculator for the day.

1. 2nd + 7 1 2
2. 2nd 0 x⁻¹ DiagonaticOn
enter enter
3. 2nd Window (change)
Indpnt to ASK

Starter 14 JAN 2019

Determine if the graph opens up or down.
Determine if the vertex is at a maximum or minimum.

- 1) $f(x) = 4x^2 - 8x + 5$
- 2) $y = -\frac{1}{4}x^2 + 10x - 1$
- 3) Determine if the functions in # 1 & 2 will be thinner or wider than the parent function.

Quadratics Graphing Calculator Notes

Given: $y = -x^2 + 4x + 5$

Axis of symmetry
X = 2 $x \in \mathbb{R}$

Domain: $x \in \mathbb{R}$

Range: $y \leq 9$

y-intercept: (0, 5)

Vertex (Maximum/Minimum points)
(2, 9) Vertex

Zeros/x-intercepts: (-1, 0) & (5, 0)

roots & solutions

You try.

Given: $y = x^2 - 7x + 10$

Axis of symmetry
X = 3.5 $x \in \mathbb{R}$

Domain: $x \in \mathbb{R}$

Range: $y \geq -2.25$

Vertex: (____, ____)

Zeros/x-intercepts: (____, 0) & (____, 0)

(3.5, -2.25)

Graphing Quadratic Equations

Graph each equation on the same graph.

a. $y = x^2$ axis of symmetry $X=0$ vertex $(0,0)$

1) b. $y = 3x^2$ axis of symmetry $X=0$ vertex $(0,0)$

c. $y = -3x^2$ axis of symmetry $X=0$ vertex $(0,0)$

points on graph

a. $(-1, 1); (1, 1)$

b. $(-1, 3); (1, 3)$

c. $(-1, -3); (1, -3)$

Graphing Quadratic Equations

Graph each equation on the same graph.

a. $y = x^2$ axis of symmetry $X=0$ vertex $(0,0)$

2) b. $y = x^2 + 4$ axis of symmetry $X=0$ vertex $(0,4)$

c. $y = x^2 - 4$ axis of symmetry $X=0$ vertex $(0,-4)$

points on graph

a. $(-1, 1); (1, 1)$

b. $(-1, 5); (1, 5)$

c. $(-1, -3); (1, -3)$

Graphing Quadratic Equations

Graph each equation on the same graph.

$y = x^2 + 2x + 3$ axis of symmetry $X=1$ vertex $(-1, 4)$

3) $y = x^2 - 2x + 3$ axis of symmetry $X=1$ vertex $(1, 2)$

$y = x^2 + 4x + 9$ axis of symmetry $X=-2$ vertex $(-2, 5)$

$(-2, 3); (0, 3)$

$(0, 3); (2, 3)$

$(-3, 6); (-1, 6)$

