

Properties of Quadratic Function

Find the properties of each quadratic function.

1) $f(x) = -5x^2 + 4x$

Domain : _____

Range : _____

x-intercepts : _____

y-intercept : _____

Vertex : _____

Maximum value : _____

Axis of symmetry : _____

Open up or down : _____

2) $f(x) = 16x^2 + 24x + 5$

Domain : _____

Range : _____

x-intercepts : _____

y-intercept : _____

Vertex : _____

Maximum value : _____

Axis of symmetry : _____

Open up or down : _____

3) $f(x) = 4x^2 + 12x - 72$

Domain : _____

Range : _____

x-intercepts : _____

y-intercept : _____

Vertex : _____

Minimum value : _____

Axis of symmetry : _____

Open up or down : _____

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Domain : _____

Range : _____

x-intercepts : _____

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Vertex : _____

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Open up or down : _____

Properties of Quadratic Function

Find the properties of each quadratic function.

1) $f(x) = -5x^2 + 4x$

Domain : Real NumbersRange : $\{y \text{ is real : } y \leq \frac{4}{5}\}$ x-intercepts : $(0, 0)$ and $(\frac{4}{5}, 0)$ y-intercept : $(0, 0)$ Vertex : $(\frac{2}{5}, \frac{4}{5})$ Maximum value : $y = \frac{4}{5}$ Axis of symmetry : $x = \frac{2}{5}$ Open up or down : Down

3) $f(x) = 4x^2 + 12x - 72$

Domain : Real NumbersRange : $\{y \text{ is real : } y \geq -81\}$ x-intercepts : $(-3, 0)$ and $(2, 0)$ y-intercept : $(0, -72)$ Vertex : $(-\frac{3}{2}, -81)$ Minimum value : $y = -81$ Axis of symmetry : $x = -\frac{3}{2}$ Open up or down : Up

2) $f(x) = 16x^2 + 24x + 5$

Domain : Real NumbersRange : $\{y \text{ is real : } y \geq -4\}$ x-intercepts : $(-\frac{1}{4}, 0)$ and $(-\frac{5}{4}, 0)$ y-intercept : $(0, 5)$ Vertex : $(-\frac{3}{4}, -4)$ Maximum value : $y = -4$ Axis of symmetry : $x = -\frac{3}{4}$ Open up or down : Up

4) $f(x) = -x^2 + 6x - 8$

Domain : Real NumbersRange : $\{y \text{ is real : } y \leq 1\}$ x-intercepts : $(2, 0)$ and $(4, 0)$ y-intercept : $(0, -8)$ Vertex : $(3, 1)$ Maximum value : $y = 1$ Axis of symmetry : $x = 3$ Open up or down : Down

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