

For each equation, decide which form it's in, identify what that form tells you, and identify the direction of the graph.

Equation	Which form is it in? (circle one)	What does that form tell you? (answer the one the form tells you)	Does this parabola open up or down?
1 $f(x) = (x - 4)^2 - 2$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
2 $f(x) = -2(x + 3)^2 - 1$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
3 $f(x) = 3(x - 5)^2 + 7$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
4 $f(x) = 2(x - 4)(x + 1)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
5 $f(x) = -4(x + 8)(x + 5)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
6 $f(x) = (x - 2)(x - 11)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
7 $f(x) = \frac{1}{3}(x + 2)^2 - 3$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
8 $f(x) = x(x + 5)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down

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Equation	Which form is it in? (circle one)	What does that form tell you? (answer the one the form tells you)	Does this parabola open up or down?
9 $f(x) = (x + 5)^2$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
10 $f(x) = -4(x - 3)^2$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
11 $f(x) = -4(x - 3)(x - 3)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
12 $f(x) = 1.1(x - 3.7)^2 + 21.3$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
13 $f(x) = 6\left(x - \frac{3}{2}\right)\left(x + \frac{5}{3}\right)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
14 $f(x) = -18(x - 33)(x + 54)$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
15 $f(x) = -(x - 13)^2$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down
16 $f(x) = 4x^2 + 7$	Vertex Factored	Coordinates of the vertex are _____ The x-intercepts are _____ and _____	up down