Quadratic Functions

Algebra 2

Give the quadratic, linear, and constant terms of the following functions.

1) $y = 3x^2 + 4x + 5$ 2) $d = -10 + 8c - c^2$ 3) $y = 3x + 7$ 4) $y = 3(4x^2 - 6)$

Give the values of a, b, and c in the following quadratic functions.

5) $y = 5x^2 - 12x + 8$ 6) $y = 3x^2 - 10$ 7) $y = -2x^2$ 8) $y = (2x + 5)(x - 3)$

9) What is the graph of an equation?

Graph the following quadratic functions by finding the vertex and two other points using a t-table (I recommend finding the y-intercept.). Check at least one of the points to make sure it satisfies the equation.

10) $y = x^2$ 11) $y = 2x^2 - 3$ 12) $y = -x^2 + 2$

Graph the following quadratic functions by finding the vertex and two other points using function notation. (I recommend finding the y-intercept.) Check at least one of the points to make sure it satisfies the equation.

13) $f(x) = 2x^2 - 8x + 12$ 14) $f(x) = -3x^2 - 24x - 39$ 15) $f(x) = x^2 + x - 6$

Graph the following functions labeling the vertex, the y-intercept, and the x-intercepts.

16) $y = x^2 + 4x - 5$

17) $f(x) = -x^2 + 5x - 6$

18) $f(c) = c^2 + 2c + 1$

19) $y = x^2 + 3x + 5$

Solve the following equations.

20) $0 = x^2 - 4x - 21$

21) $0 = x^2 + x - 12$

22) $0 = 2b^2 + 10b - 12$

23) $0 = x^2 - 49$

24) $0 = 3w^2 - 48$

25) $0 = 10w^2 + 11w - 6$