#1-9 Determine if each function is quadratic, linear or a constant. Then identify the values of a, b and c, given the standard form is $y = ax^2 + bx + c$

1. $y = x + 4$ 2. $y = 2x^2 - (3x - 5)$ 3. $y = 3x(x - 2)$

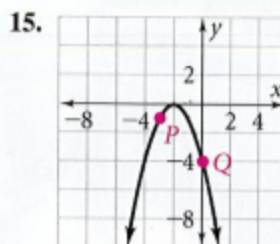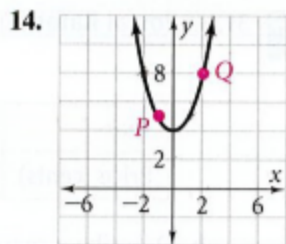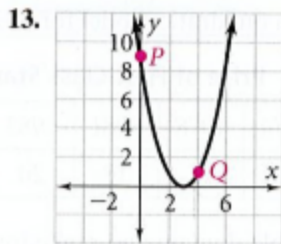4. $f(x) = x^2 - 7$ 5. $y = (x - 2)(x + 5)$ 6. $g(x) = -7(x - 4)$

7. $h(x) = (3x)(2x) + 6$ 8. $y = x(1 - x) - (1 - x^2)$ 9. $f(x) = -x(2x + 8)$

Identify the vertex and the axis of symmetry of each parabola.

10.   11.   12.
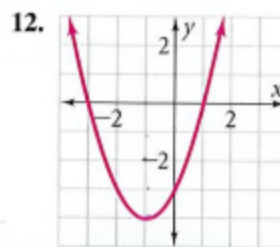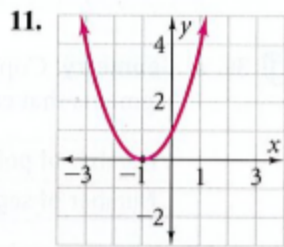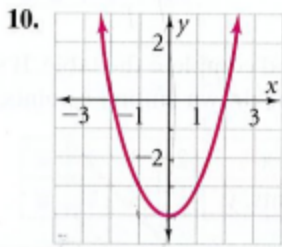
For each parabola, identify points corresponding to P and Q.

13.   14.   15.

44. For which quadratic function is -3 the constant term?
    A. $y = (3x + 1)(-x - 3)$ B. $y = x^2 - 3x + 3$
    C. $f(x) = (x - 3)(x - 3)$ D. $g(x) = -3x^2 + 3x + 9$

45. The vertex of a parabola is (3, 2). A second point on the parabola is (1, 7). Which point is also on the parabola?
    F. $(-1, 7)$ G. $(3, 7)$ H. $(5, 7)$ J. $(3, -2)$

46. The graph of a quadratic function has vertex $(-3, -2)$. What is the axis of symmetry?
    A. $x = -3$ B. $x = 3$ C. $y = -2$ D. $y = 2$

47. Which function is NOT a quadratic function?
    F. $y = (x - 1)(x - 2)$ G. $y = x^2 + 2x - 3$
    H. $y = 3x - x^2$ J. $y = -x^2 + x(x - 3)$

Solve by using elimination

50. $\begin{cases} 3x + y - 2z = -3 \\ x - 3y - z = -2 \\ 2x + 2y + 3z = 11 \end{cases}$