Exercises — Graphing quadratic functions

1. Plot the points $(x, f(x))$ at $x = -4, -3, -2, -1, 0, 1, 2, 3, 4$ for the function $f(x) = x^2 - 6x + 2$.
2. Sketch the graph of $f(x) = x^2 + 3x - 4$.
3. Sketch the graph of $f(x) = -2x^2 - 3x + 4$.
4. Sketch the graph of $2y + 3 = x^2 + 3x$.
5. Sketch the graph of $-3y - 4 = x^2 + 3x + 12$.
6. Find the axis of symmetry and the vertex of the parabola $y = x^2 + 3x - 5$.
7. Find the axis of symmetry and the vertex of the parabola $y = -3x^2 - 6x + 5$.
8. Find the axis of symmetry and the vertex of the parabola $3y = x^2 + 3x - 5$.
9. Find the axis of symmetry and the vertex of the parabola $-3y = 2x^2 + 3x$.
10. Find the axis of symmetry and the vertex of the parabola $-2y = 3x^2 + 3x + 15$.
11. Sketch the graph of $-2y = -3x^2 + 3x + 15$.
12. Sketch the graph of $3y = -3x^2 + 6x + 20$.