Integrated 2 Finding the Vertex of a Quadratic

For each problem make a table, find the vertex, axis of symmetry, direction of opening, min/max value, *x*-intercept, *y*-intercept. Then graph the quadratic. Label the vertex and axis of symmetry.

Using $= -\frac{b}{2a}$:

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

Using completing the square

5) $y = x^2 + 3x + 2$ 6) $y = x^2 - 4x + 3$ 7) $y = -x^2 + 4x + 5$ 8 $y = -x^2 + 2x + 8$