Worksheet #18

For #1-4, write the quadratic equation in standard form and identify the vertex
    and the value of a.
1) $f(x) = x^2 + 18x - 7$
2) $f(x) = 3x^2 - 12x + 11$
3) $f(x) = 4x^2 + 14x - 5$
4) $f(x) = 2x^2 - 6x + 8$

For #5-8, write the quadratic equation in standard form and in general form given
    the vertex and another point on the graph.
5) vertex: (-3, -2), point: (0, 5)
6) vertex: (-1, 4), point: (1, -2)
7) vertex: (0, 3), point: (-2, 5)
8) vertex: (-2, 2), point: (-1, 0)

9) Find f(-4), f(-1), f(1), f(3), and f(6) if given f(x) as:

$$f(x) = \begin{cases} |4x - 7|, & x \le 1 \\ x^3 - 4, & x > 1 \end{cases}$$