Changing from Standard Form to Vertex form

Notes:

The axis of symmetry which is the vertical line through the vertex can be found from standard

form $y = ax^2 + bx + c$ by the equation $x =$ _____

which gives you the h-value of vertex form.

For each problem below change the standard form equation into vertex form and state the following: Does it open up or down, is it a stretch or a shrink or neither, what is the y-intercept, what is the axis of symmetry, what is the vertex.

1) $y = x^2 - 6x + 14$

2) $y = x^2 + 10x + 21$

3) $f(x) = x^2 - 4x - 4$

4) $y = x^2 - 12x + 26$

5) $f(x) = 2x^2 - 4x + 5$

6) $y = -3x^2 - 24x - 57$

7) $y = 5x^2 - 70x + 245$