Graph these quadratic equations.

1) For these examples…
* Find the *y*-intercept.
* Find the vertex, *x* and *y* coordinates.
* Find the axis of symmetry.
* Find the *x*-intercepts, if possible.

a) $y = x^2 - 6x + 4$
b) $y = x^2 + 10x$
c) $y = x^2 + 3x + 8$
d) $y = -x^2 - 7x + 30$
e) $y = x^2 - 14x + 24$
f) $y = -x^2 + 5x + 15$

2) For these examples…
* Find the *y*-intercept.
* Find the vertex, *x* coordinate only.
* Find the axis of symmetry.
* Find the *x*-intercepts, if possible.
* If there are no *x*-intercepts, find the *y*-coordinate of the vertex, if practical.
* If that fails, find two ordered pairs near the axis of symmetry to approximate the vertex.

a) $y = 2x^2 - 5x - 12$
b) $y = -3x^2 + 6x - 5$
c) $y = 5x^2 - 15x$
d) $y = 2x^2 + 9x - 40$
e) $y = 8x^2 + 21x - 10$
f) $y = \frac{1}{2}x^2 + 8x + 11$

g) $y = \frac{1}{3}x^2 - 9x + 42$

h) $y = -\frac{1}{5}x^2 + x - 7$