Practice for 2.2 Polynomials

The following problems will help you practice the material you learned today. Once you are finished check your solutions. Once done, you can work on your WeBWorK homework.

1. Determine the x-intercepts if possible, the y intercepts, and end behavior and sketch the function. If you cannot find the x-intercepts plot a few points to draw the graph.

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

$$G(x) = -x^3 + 2x - 3$$

2. Sketch these transformations of $y = x^2$. Quick-draw them

   a. $y = -2x^2$ b. $y = (x+1)^2$ c. $y = x^2 - 3$

   d. $y = -(x-2)^2 + 3$ e. $y = 0.5(x+2)^2 - 1$ d. $y = -3x^2 - 2$

3. Complete the square to sketch these quadratic functions using transformations. State the vertex, axis of symmetry and thex- intercepts and the y-intercept of each.

   a. $y = 3x^2 - 6x + 2$ b. $y = -x^2 + 8x - 5$