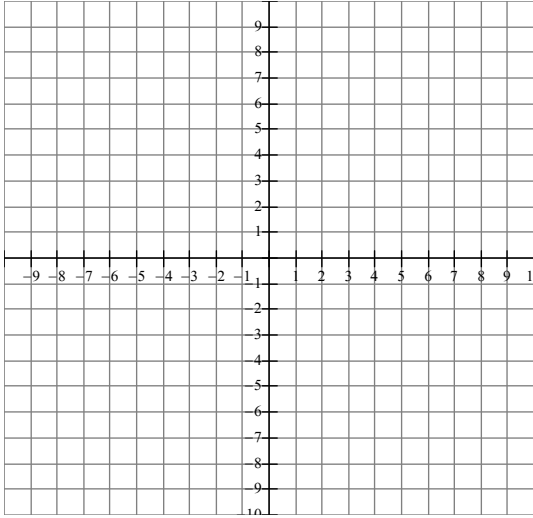


Name: _____

Pre-Calculus 11 Review

1. For each of the following functions sketch the graph on the axes provided and state the domain and range for each function.

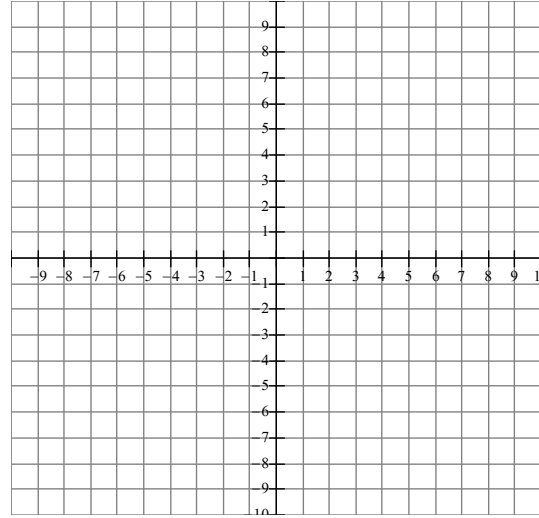
a) $y = x^2$



Domain: _____

Range: _____

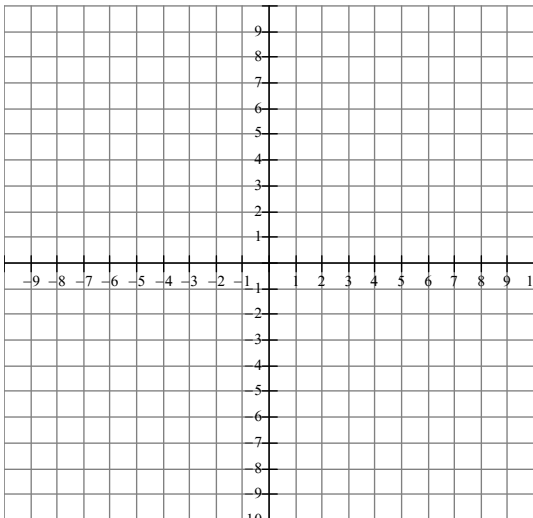
b) $y = 3x - 5$



Domain: _____

Range: _____

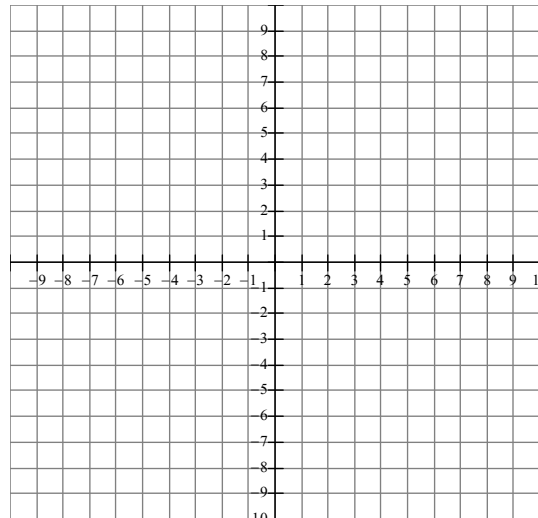
c) $y = (x - 3)^2 + 2$



Domain: _____

Range: _____

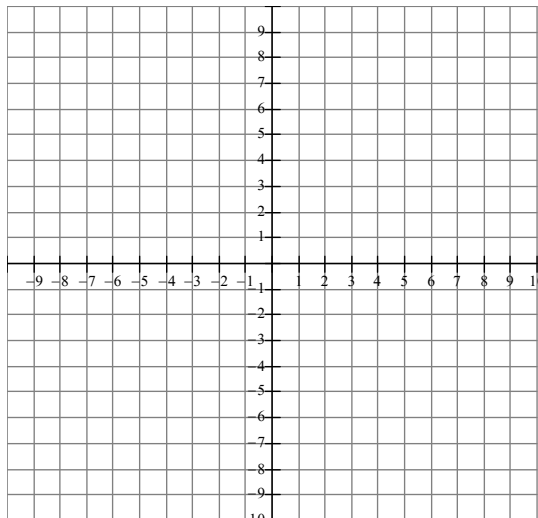
d) $y = -2x^2 + 3$



Domain: _____

Range: _____

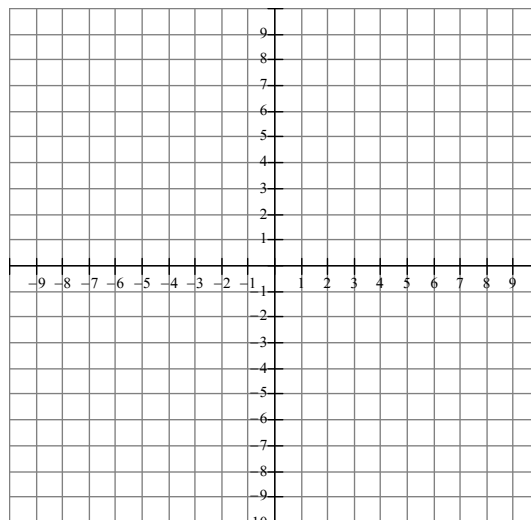
e) $y = \frac{1}{2}(x + 2)^2 + 2$



Domain: _____

Range: _____

f) $y = -\frac{4}{3}x + 5$



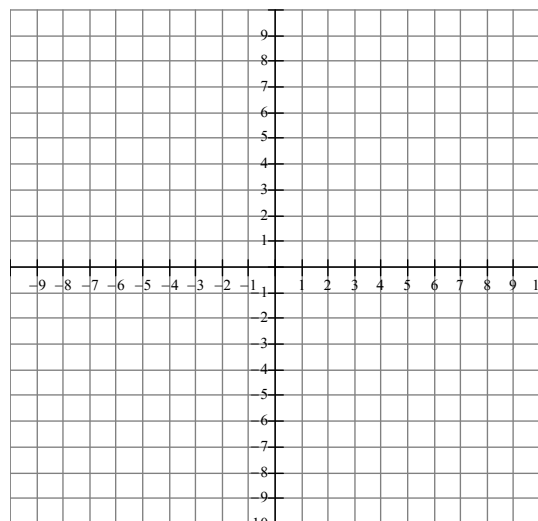
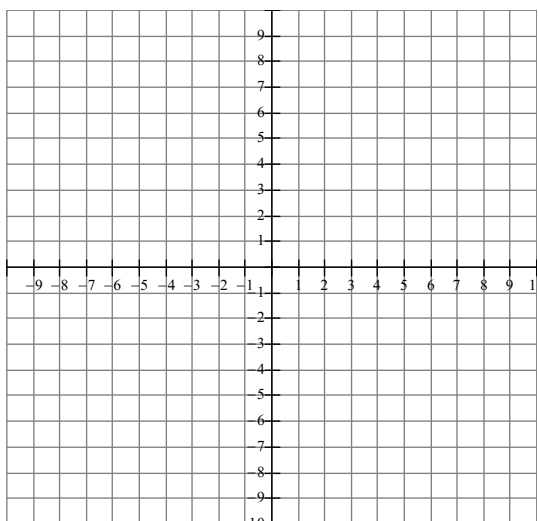
Domain: _____

Range: _____

2. Rewrite the following quadratics in vertex form and sketch the graph.

a) $y = x^2 + 6x + 5$

b) $y = -3x^2 - 12x - 9$



3. Rewrite the following equations in vertex form and state the vertex, axis of symmetry, direction of opening, max or min, domain and range.

a) $f(x) = x^2 - 10x + 6$

Vertex: _____

Axis of Symmetry: _____

Direction of Opening: _____

Max or min: _____

Domain: _____

Range: _____

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

Vertex: _____

Axis of Symmetry: _____

Direction of Opening: _____

Max or min: _____

Domain: _____

Range: _____

4. Factor the following polynomials.

a) $x^2 - x - 6$

b) $x^2 + 2x - 35$

c) $2x^2 + 11x + 5$

d) $3x^2 + 7x - 6$

5. Solve the following equations.

a) $3m^2 + 2m = 0$

b) $x^2 - 2x - 11 = 4$

c) $3p^2 + 8p - 9 = 2p$

d) $\frac{2}{x+3} - \frac{3}{x-2} = 2$

e) $x^2 - 2x - 1 = 0$