

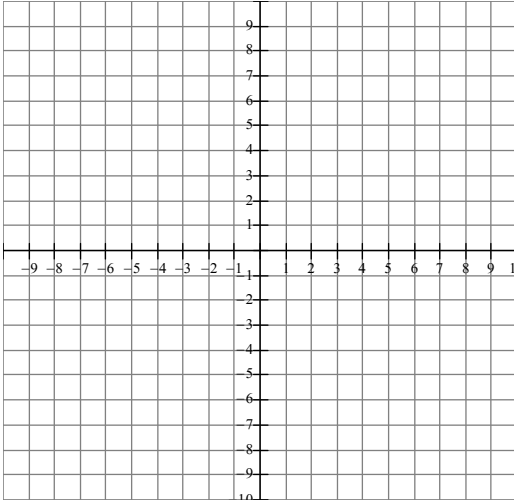
Name: _____

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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.

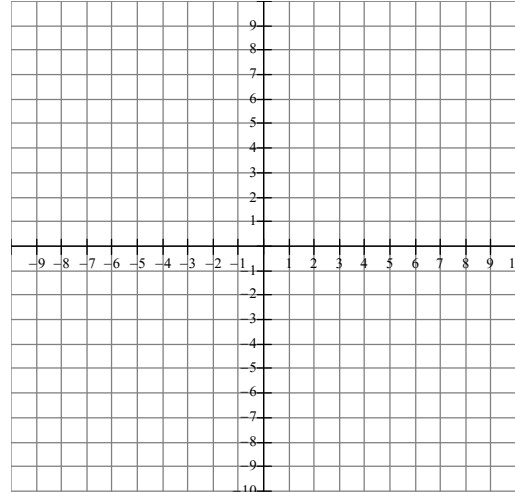
(a) $y = x^2$



Domain: _____

Range: _____

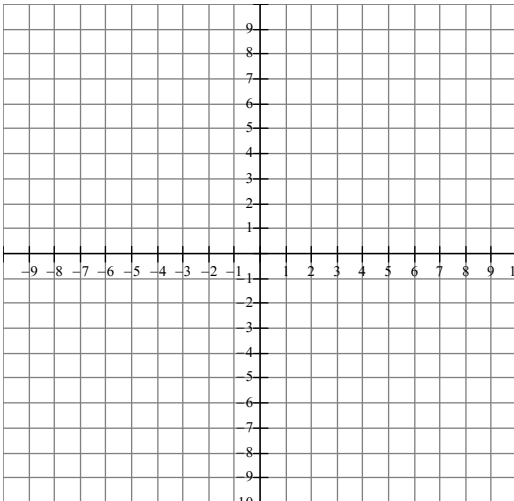
(b) $y = 3x - 5$



Domain: _____

Range: _____

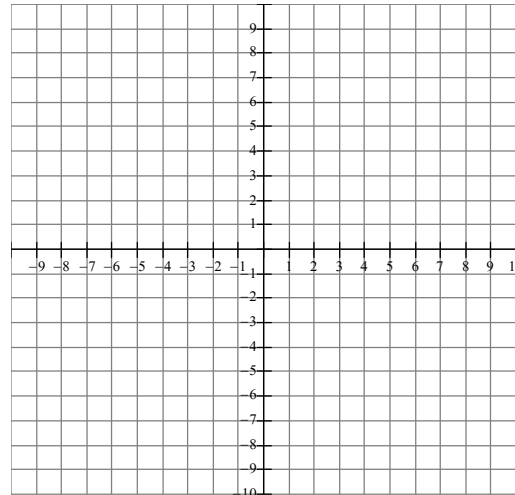
(c) $y = (x - 3)^2 + 2$



Domain: _____

Range: _____

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

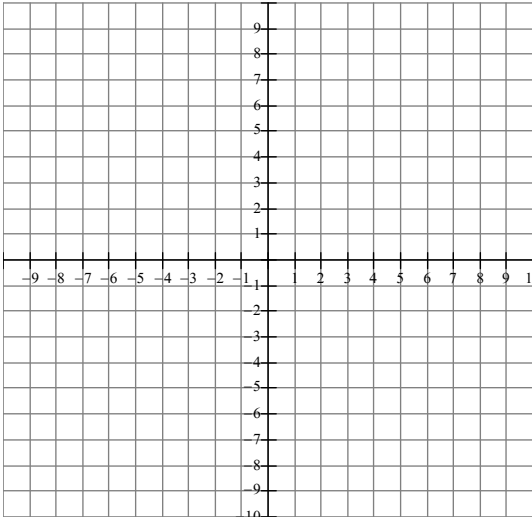


Domain: _____

Range: _____

Pre-Calculus 12

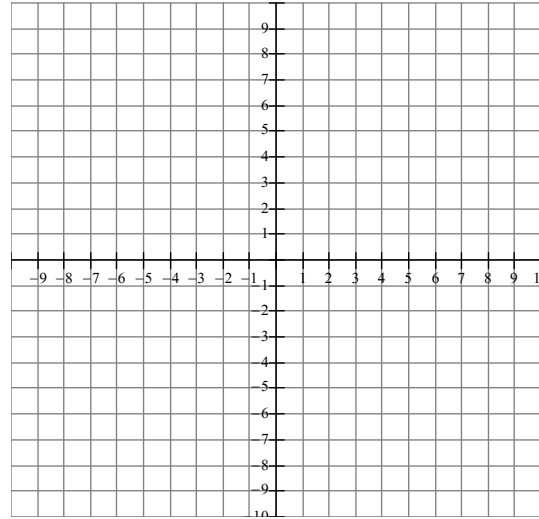
(e) $y = \frac{1}{2}(x+2)^2 + 2$



Domain: _____

Range: _____

(f) $y = -\frac{1}{2}x + 3$

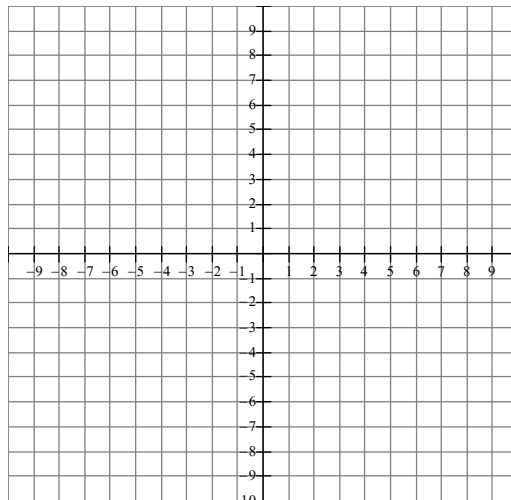


Domain: _____

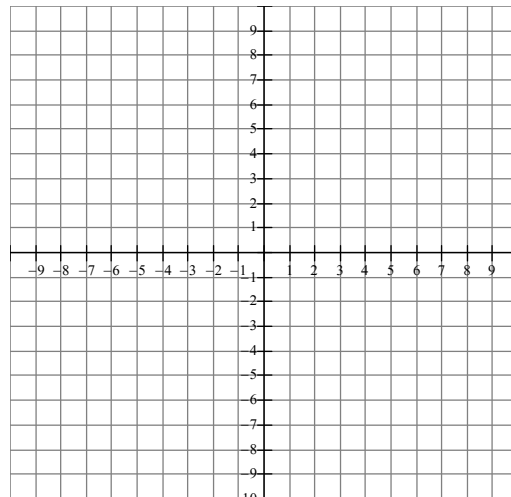
Range: _____

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

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



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



Pre-Calculus 12

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

Pre-Calculus 12

5. Solve the following quadratic equations.

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

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

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

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

Hint:
Clear the fractions
first by multiplying all
terms by the
common
denominator

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

Hint:
You need the
quadratic
formula for
this question