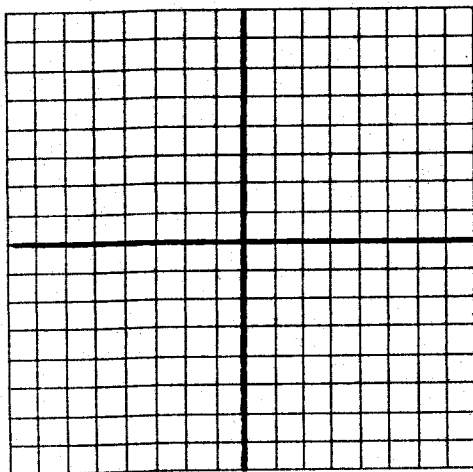Principles of Math 11 - Lesson Notes (L4)
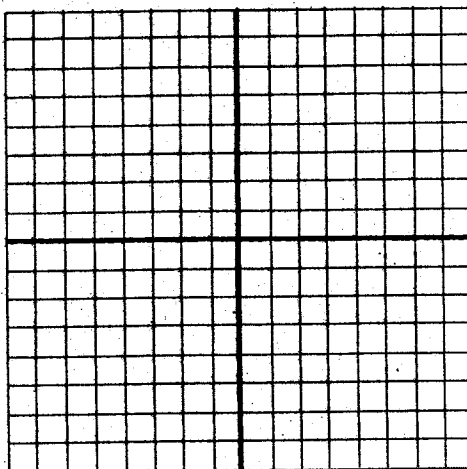
Graphing $y = (x-p)^2 + q$

Graph each of the following quadratic functions. In each case, state the vertex, the equation of the axis of symmetry, the range, the y - intercept, and any x - intercepts.
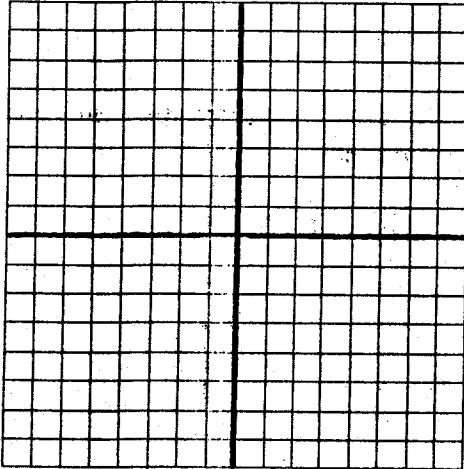
a) $y = x^2$

b) $y = (x+3)^2$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

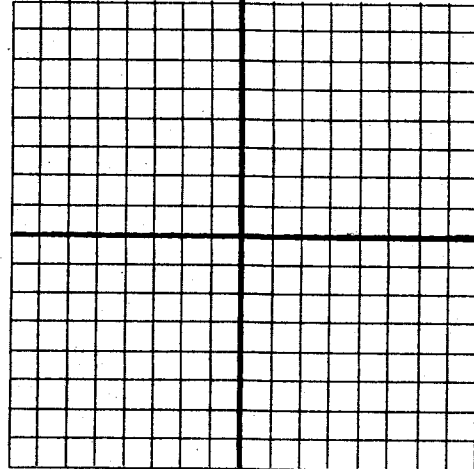x - intercept(s) _____

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____
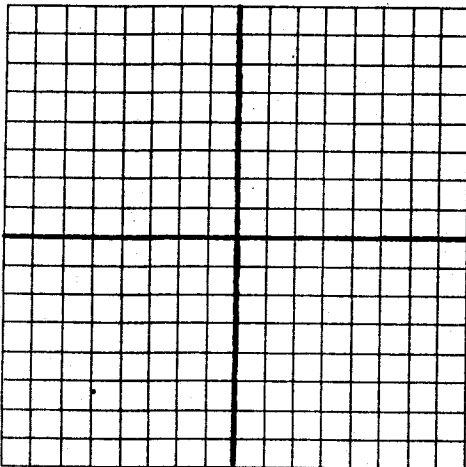
c) $y = x^2 - 4$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____
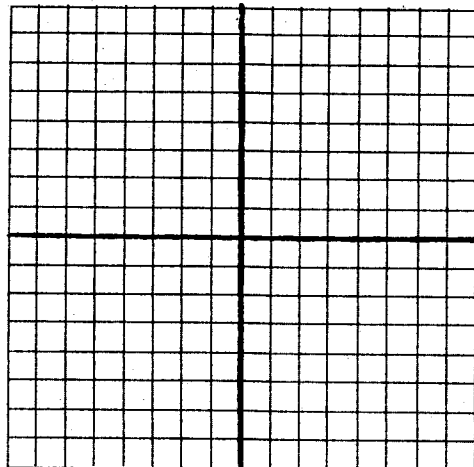

d) $y = (x - 1)^2 + 3$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____

e) $y = (x - 2)^2 - 5$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

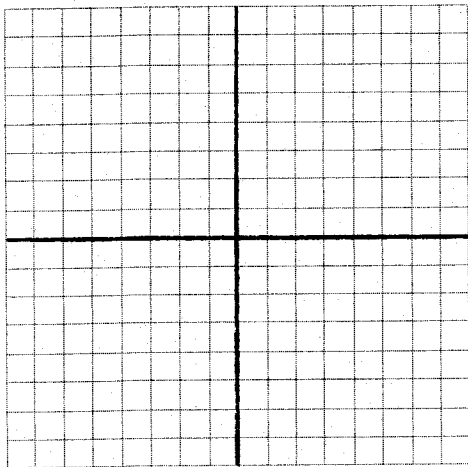x - intercept(s) _____

f) $y = (x + 2)^2 + 3$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____

Principles of Math 11 - Homework
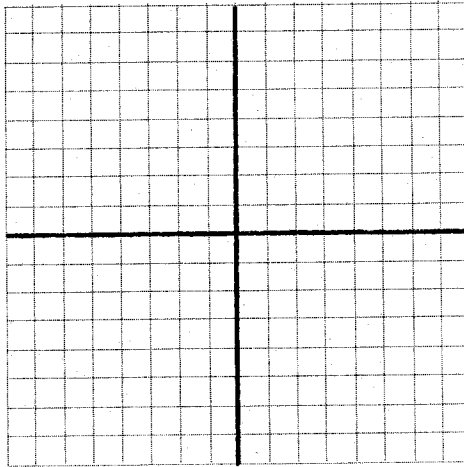
Graphing $y = (x-p)^2 + q$

Graph each of the following quadratic functions. In each case, state the vertex, the equation of the axis of symmetry, the range, the y - intercept, and any x - intercepts.
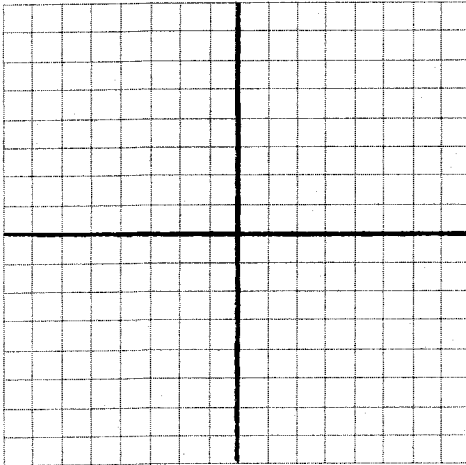
a) $y = (x+2)^2 - 5$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____

b) $y = (x+4)^2 + 2$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____
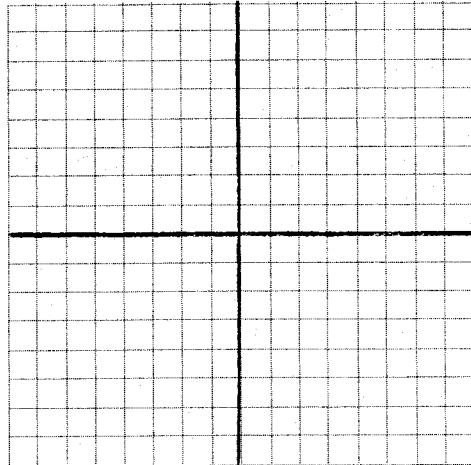
c) $y = (x-7)^2$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____
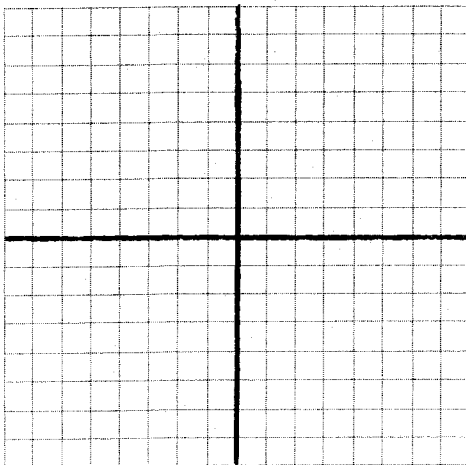
d) $y = x^2 + 6$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____
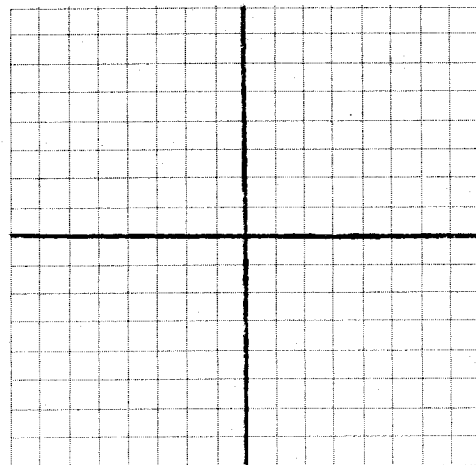
e) $y = (x-3)^2 - 4$

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____

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

Vertex _____

Axis of Symmetry _____

Range _____

y - intercept _____

x - intercept(s) _____