Module 7 Lesson 2 Assignment Name:_____

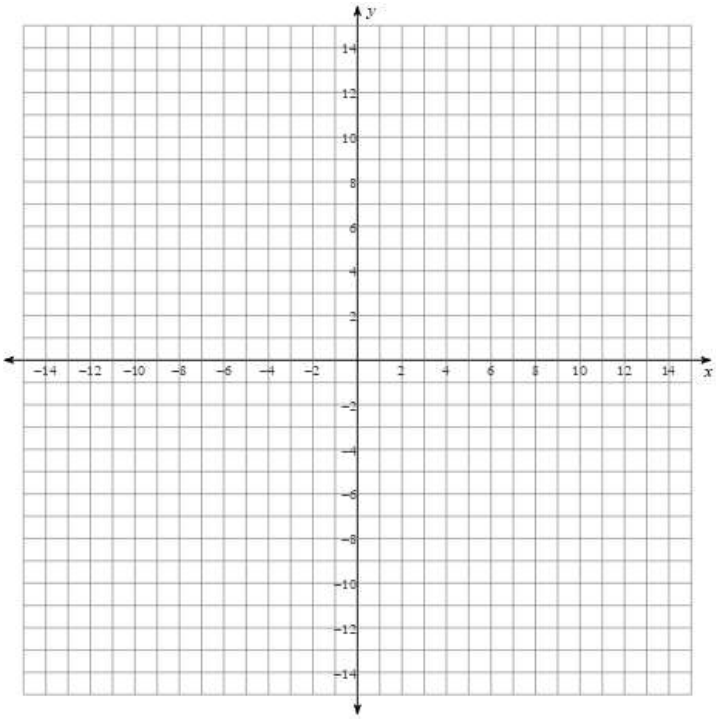
For each quadratic equation:

a) Complete the square to put the equation in vertex form.
b) Graph the quadratic equation using shifts.
c) State the coordinates of the vertex.
d) Determine whether the vertex is a minimum or a maximum.
e) State the equation for the Axis of Symmetry.
f) Find the coordinates of the roots by graphing. If integral roots cannot be found, estimate the roots by stating the consecutive integers between which the roots lie.
g) State the domain and range of the parabola.

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

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

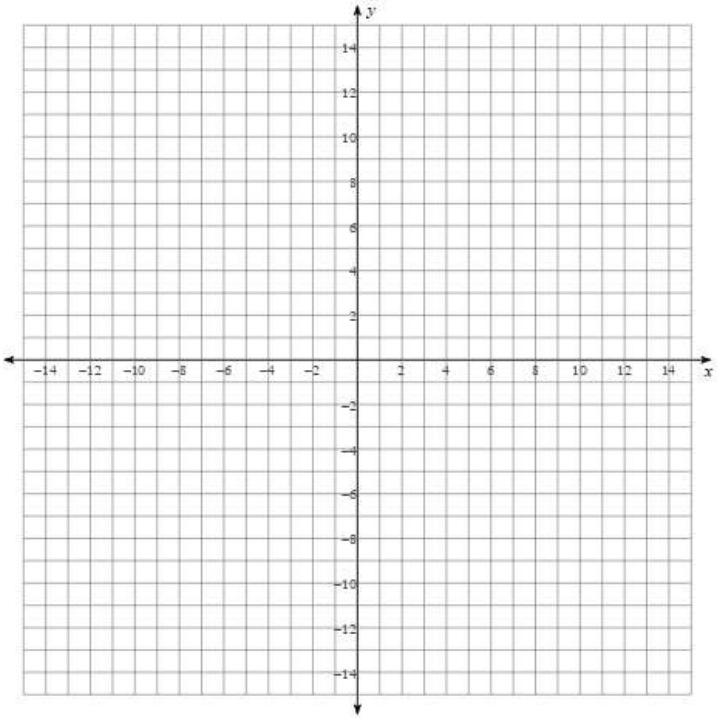
g) Domain:

Range:

2) $f(x) = x^2 - 2x + 1$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

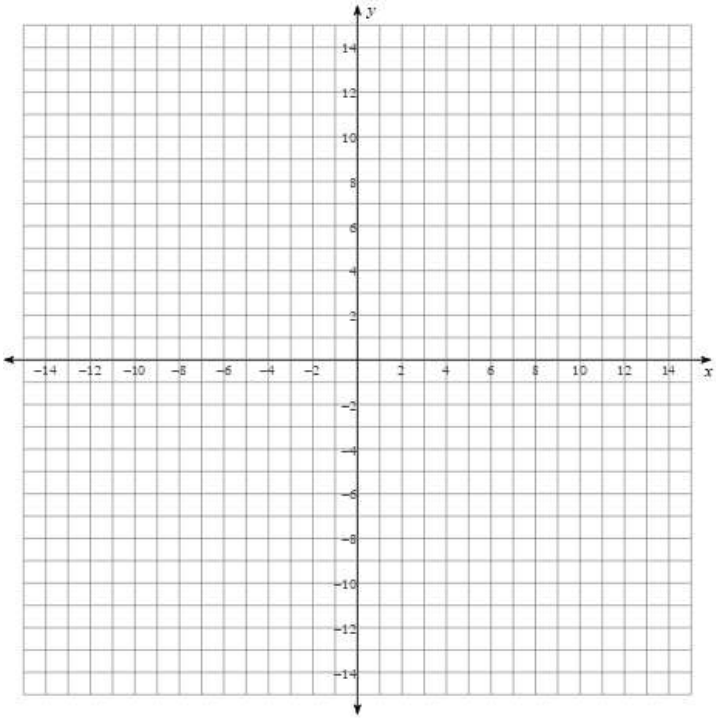
g) Domain:

Range:

3) $f(x) = 2x^2 + 4x - 6$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

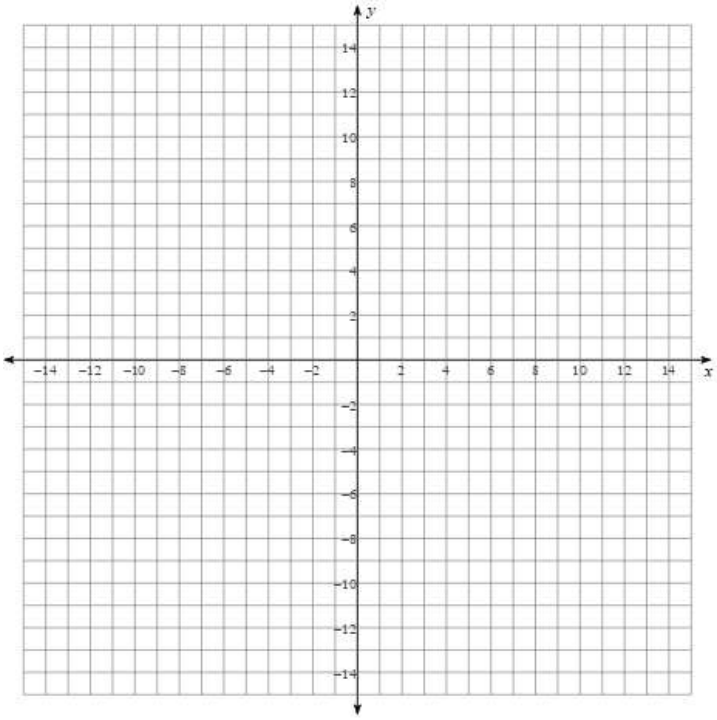
g) Domain:

Range:

4) $f(x) = x^2 + 6x + 3$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

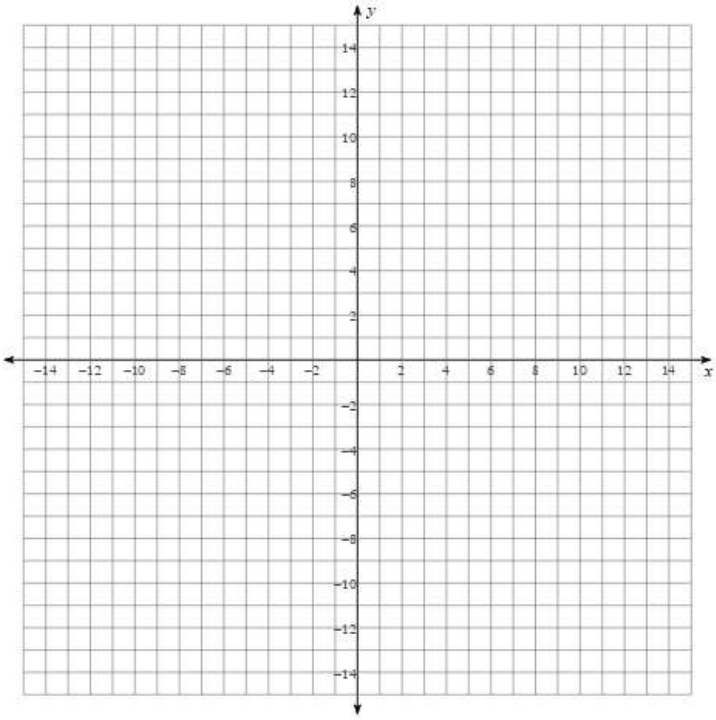
g) Domain:

Range:

5) $f(x) = 4x^2 - 12x + 3$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

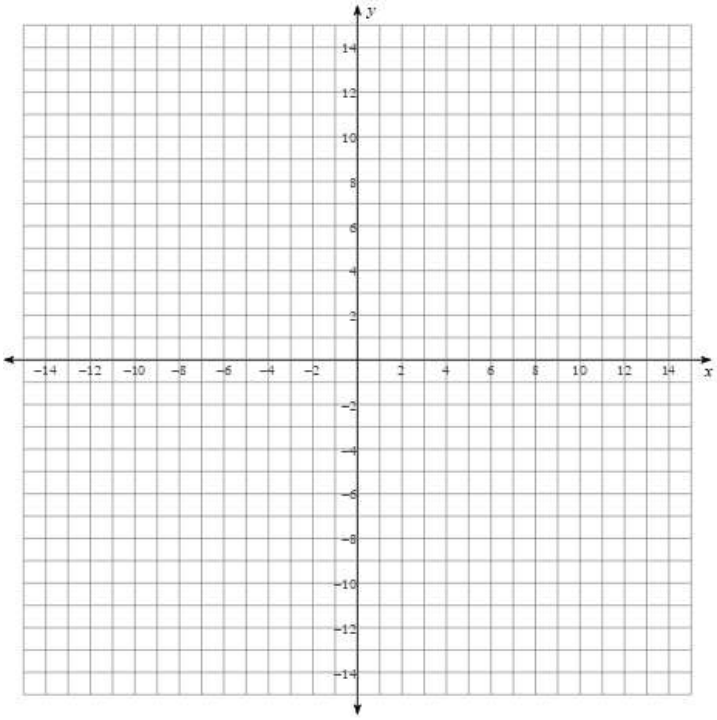
g) Domain:

Range:

6) $f(x) = -x^2 + 4x - 1$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

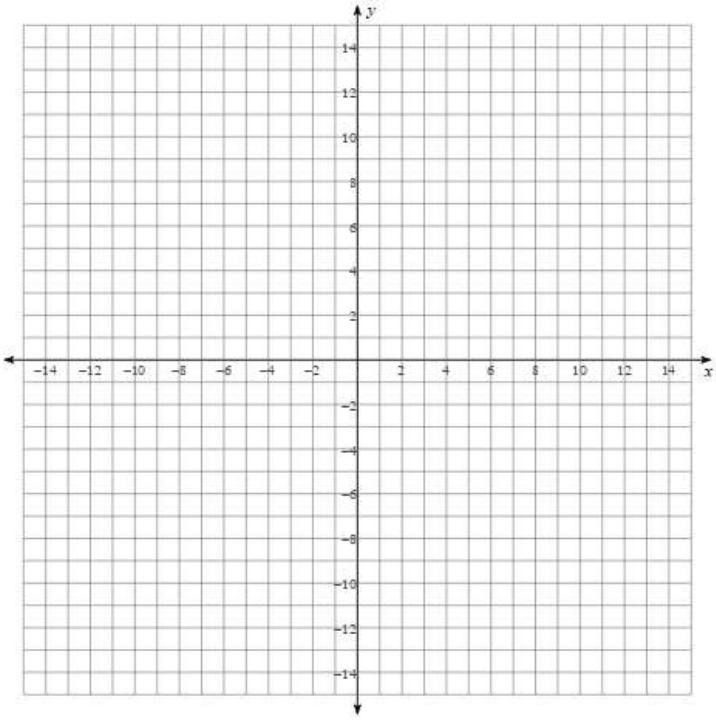
g) Domain:

Range:

7) $f(x) = 2x^2 + 4$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

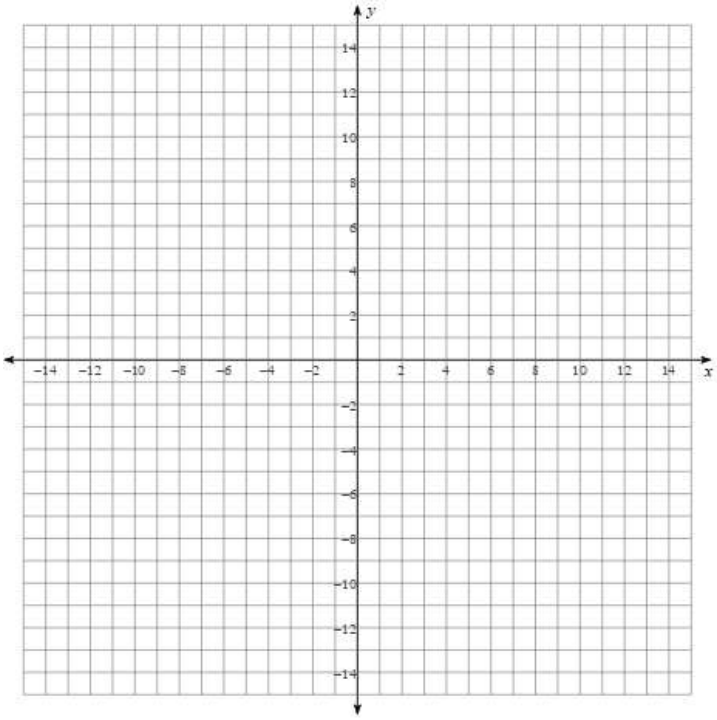
g) Domain:

Range:

8) $f(x) = -2x^2 + 10x - 5$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

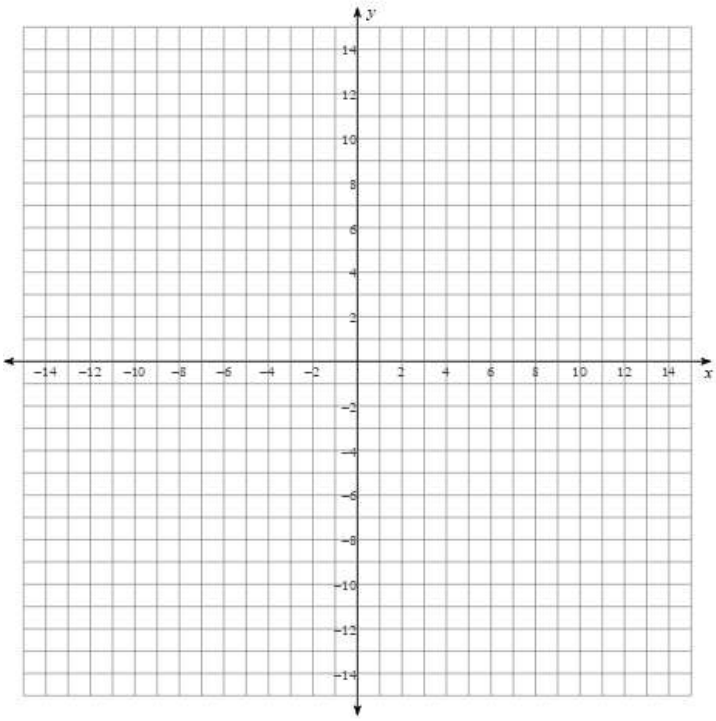
g) Domain:

Range:

9) $f(x) = \frac{1}{2}x^2 + 2x + 7$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

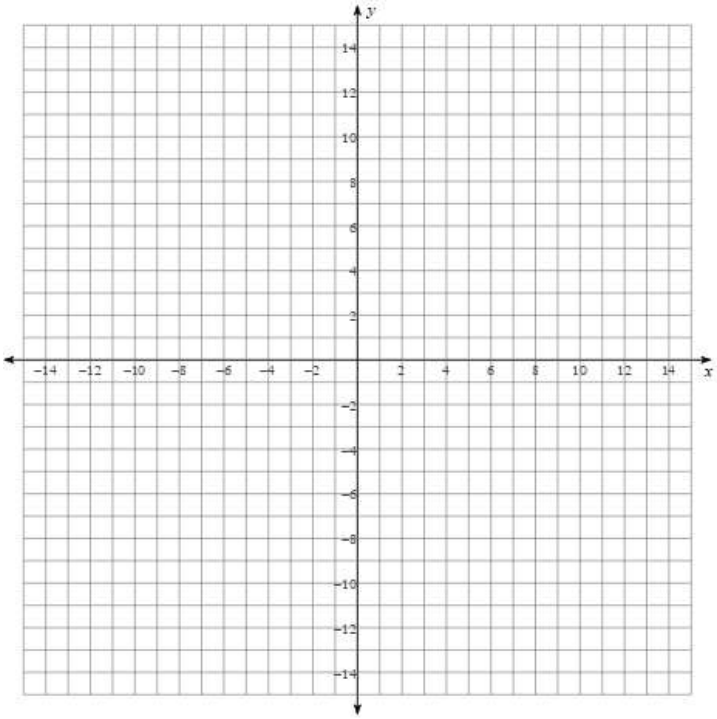
g) Domain:

Range:

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

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

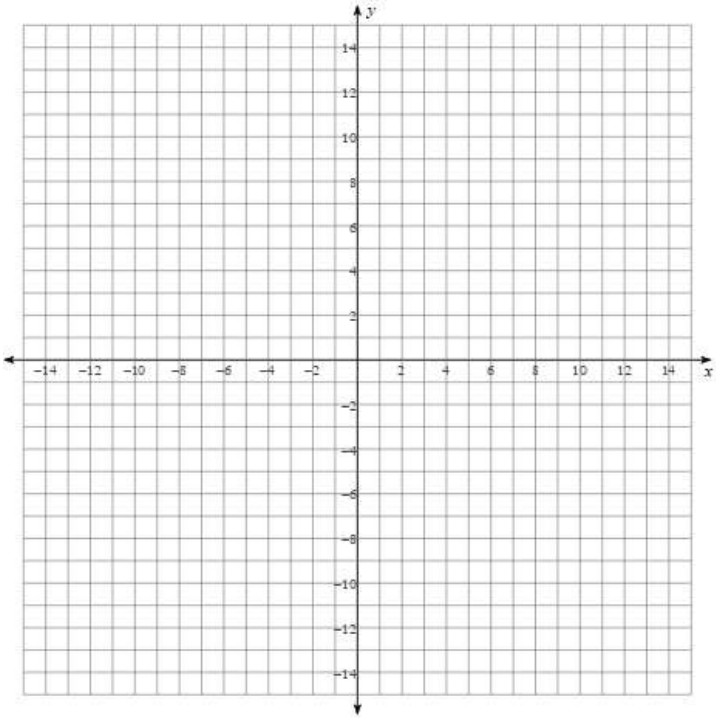
g) Domain:

Range:

11) $f(x) = -2x^2 + 8x - 3$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

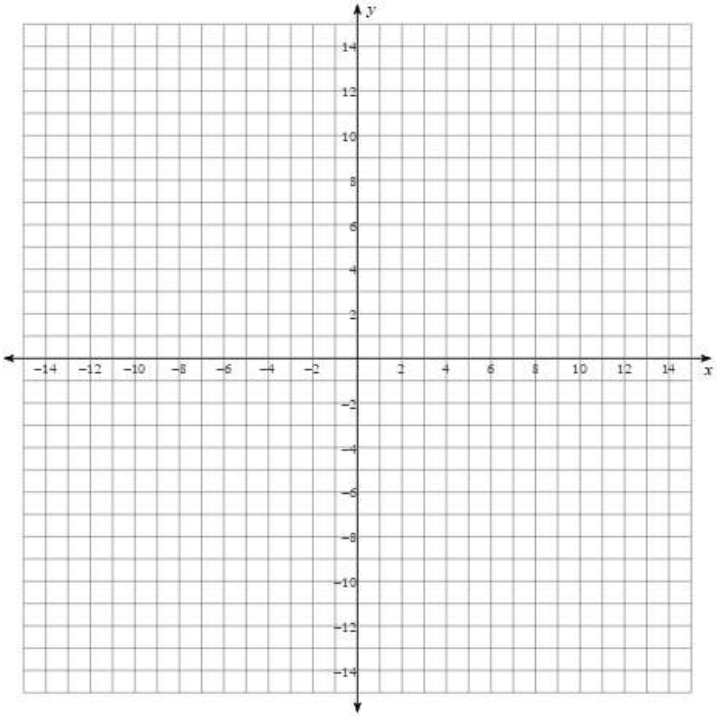
g) Domain:

Range:

12) $f(x) = -\frac{1}{2}x^2 - 4x - 3$

a) Vertex form of equation:

b)



c) Vertex:

d) Circle one:

Maximum Minimum

e) Axis of Symmetry:

f) Roots:

g) Domain:

Range: