

**Prerequisites & Investigations****LEARNING PLAN**

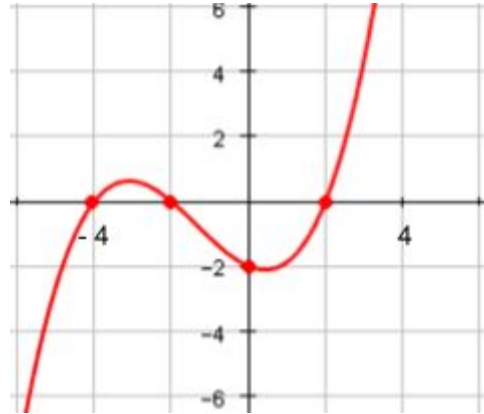
(Chapter 1)

<b>Skill/Understanding:</b>	<b>Review/Practice Problems</b>
<b>Function Notation</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can evaluate <math>f(x)</math> when given <math>x</math>.</li> <li><input type="checkbox"/> I can solve for <math>x</math> when given a value for <math>f(x)</math>.</li> <li><input type="checkbox"/> I can use function notation to express inputs and outputs of a function.</li> </ul>	1-4, 1-5, 1-6, 1-17, 1-24, 1-25, 1-38, 1-56, and CL 1-110.  Checkpoint 3
<b>Graphing and Describing Graphs</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can sketch graphs of functions.</li> <li><input type="checkbox"/> I can completely describe the graphs using appropriate vocabulary.</li> <li><input type="checkbox"/> I can determine the domain and range when given a graph.</li> <li><input type="checkbox"/> I can determine the domain of a square root function or a rational function given the equation.</li> </ul>	1-22, 1-42, 1-60, 1-83, 1-97, and CL 1-114.
<b>Linear Equations</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can solve linear equations with fractions or decimals.</li> <li><input type="checkbox"/> I can solve linear equations with absolute value.</li> <li><input type="checkbox"/> I can solve a linear system of equations using substitution or elimination.</li> <li><input type="checkbox"/> I can create multiple representations of a linear relationship (graph, equation, table, description, etc.)</li> </ul>	1-9, 1-28, 1-44, 1-95, CL 1-113, and 3-49.  1-16, 1-39, 1-58, 1-70, 1-105, and CL 1-117.  Checkpoint 6
<b>Solving Quadratics</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can solve quadratic equations with the quadratic formula.</li> <li><input type="checkbox"/> I can solve quadratic equations by factoring and using the Zero Product Property (ZPP).</li> </ul>	1-19, 1-23, 1-45, 1-47, 1-87, 1-104, and CL 1-116.  Checkpoint 2
<b>Intercepts</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can determine the x- and y-intercepts of a function from an equation, a table, or a graph.</li> </ul>	1-71, 1-89, 1-91 d,
<b>Multiplying Polynomials</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can multiply polynomial expressions using an area model.</li> </ul>	1-91
<b>Exponent Laws</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> I can use the laws of exponents to simplify expressions.</li> </ul>	1-67 a & b,

## PRACTICE PROBLEMS:

1) Describe the graph below completely.

- shape
- line of symmetry or asymptotes
- oriented upward or downward
- increasing or decreasing
- Important points (such as x and y-intercepts, endpoints, vertices, maximum or minimum points, etc.)
- domain and range
- continuous or discrete
- whether it is a function



2) Complete the table and graph the equation:

$$y = \frac{1}{2}x^2 + 4$$

3) For  $f(x) = (x + 1)^2$ , evaluate each of the following. Show all work!

a.  $f(2)$

b.  $f(a + 1)$

c.  $f(x) = 25$

4) Solve:

a.  $\frac{x-4}{3} = 7 - \frac{x}{6}$

b.  $-3|x + 5| = -21$

c.  $x^2 - 8x + 15 = 0$

5) Solve the system of equations algebraically.

$$y = 3x + 4$$

$$y + 5 = 2x$$

6) Multiply:  $(2x - 6)(2x + 4x - 1)$

7) Simplify:

a.  $5^0$

b.  $(xy^3z)^3$

c.  $(2x^2y^5)(3x^4y)$

d.  $x^{-5}$

e.  $\frac{x^5y}{x^2y^2}$