Section A.6
Section Objectives:

- Recognize a functin whose graph is a line algebraically, graphically and from a table.
- Know the definition of the slope of a line. Recognize lines with positive, negative, zero and undefined slope.
- Find the slope of a line from an algebraic expression, a graph and a table.
- Find the equation of a line given two points, or a point and a slope.
- Given either a table of values, and algebraic equation or a graph of a line, find the other two.
- Use both point-intercept, and point-slope forms to find the equation of a line.
- Recognize and find parallel and perpendicular lines.

Practice Problems

1. Determine which of the tables below could represent a linear function. Find the equation of the line and sketch a graph.

x	y
1	5
2	7
4	11
6	15

x	y
1	2
2	3
3	5
4	8

2. Find the equation of the line between (2,3) and (4,9) in both point-slope form and point-intercept form.

3. Graph $2x + 4y = 6$. Find the x-intercepts and y-intercepts both graphically and numerically.

4. Find the equation of a line parallel to $y = 3x + 4$ which passes through the point $(2, 3)$.

5. Find the y intercept of the line perpendicular to $y = 3x - 2$ at the point $(1, 1)$. Illustrate with a graph.

More Practice from Textbook A.6: You should do as many problems from each set (1-8, 9-20, 21-24, 25-46, 47, 48, 49-64), as needed until you are comfortable with these techniques. Problems 49-64 are great practice for more in depth word problems. s