

## Integrated Mathematics 2 – Key Objectives | **Linear Relations Unit**

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This Linear Functions Unit will encompass 2 MAJOR concepts – both of which you know from Grade 8 Math. The MAJOR concepts are: (1) Linear Relations and (2) Linear Systems. Both of these major concepts will be continually revisited in later units in the course and in your High School Math experience, so it is important to understand these concepts and master the required skills.

### **(1) Linear Relations:**

- Know and be able to use the formula for slope. **(R)**
- Given an equation in slope-intercept form, standard (general) form, or point-slope form, graph the corresponding line. **(R)**
- Given a graph of a line, be able to write the corresponding linear equation in slope-intercept form, standard (general) form, or point-slope form. **(R)**
- Be able to write the equations of horizontal and vertical lines. **(R)**
- Use information about parallel or perpendicular lines when writing equations for lines. **(R)**
- Work with domain and range of linear relations in the context of piecewise linear relations **(N)**
- Write and work with equations of linear relations that represent real-world situations. **(R)**

### **(2) Linear Equations & Systems:**

- Solve multi-step linear equations. **(R)**
- Write and solve equations that represent real-world situations. **(R)**
- Solve a literal equation for a specified variable (i.e., rearrange a formula) **(R)**
- State what is meant by the terms “system of equations” and “linear system” **(R)**
- State what a solution to a system means **(R)**
- Predict the number of solutions given a linear system. **(N)**
  
- Solve a system of two linear equations using multiple representations (by graphical methods, by algebraic methods, by numeric methods). **(R)**
- Write and solve a system of equations which represent modeling situations, real world applications, data analysis, geometric applications, etc..... **(R)**