



Dear Eighth Grade Families,

In Unit 7, students will work on the following eighth grade Common Core standards in the Functions (F) domains.

8.F.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
8.F.2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
8.F.3	Interpret the equation $y=mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
8.F.4	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x,y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
8.F.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or non-linear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

### Unit 7 Concepts:

- Linear functions
- Nonlinear functions
- Initial value & Rate of change
- Comparing Functions

### Unit 7 Vocabulary:

- Input & output
- Relation
- Function & function rule
- Linear & nonlinear function
- Polynomial

- Initial value
- Rate of change
- Dependent variable
- Independent variable
- Positive slope
- Negative slope

Ask questions like these to help your child as a productive mathematical thinker:

- Given a graph, how do you find slope?
- How can you tell if your answer makes sense?
- Which form of a function do you prefer? Why?
- Explain the difference between linear and nonlinear.
- What is the rate of change?
- How would describe this process?

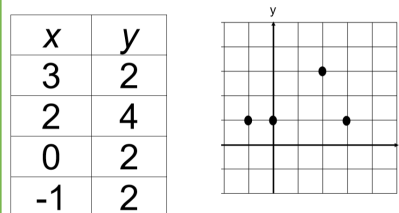
Need a review? Check out our lesson videos online!

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If you don't know the class's special name, ask your child's teacher.

### Functions

$\{(2,4), (3,2), (0,2), (-1,2)\}$



We encourage you to talk with your child daily about what was learned in math class.  
Thank you for your support!