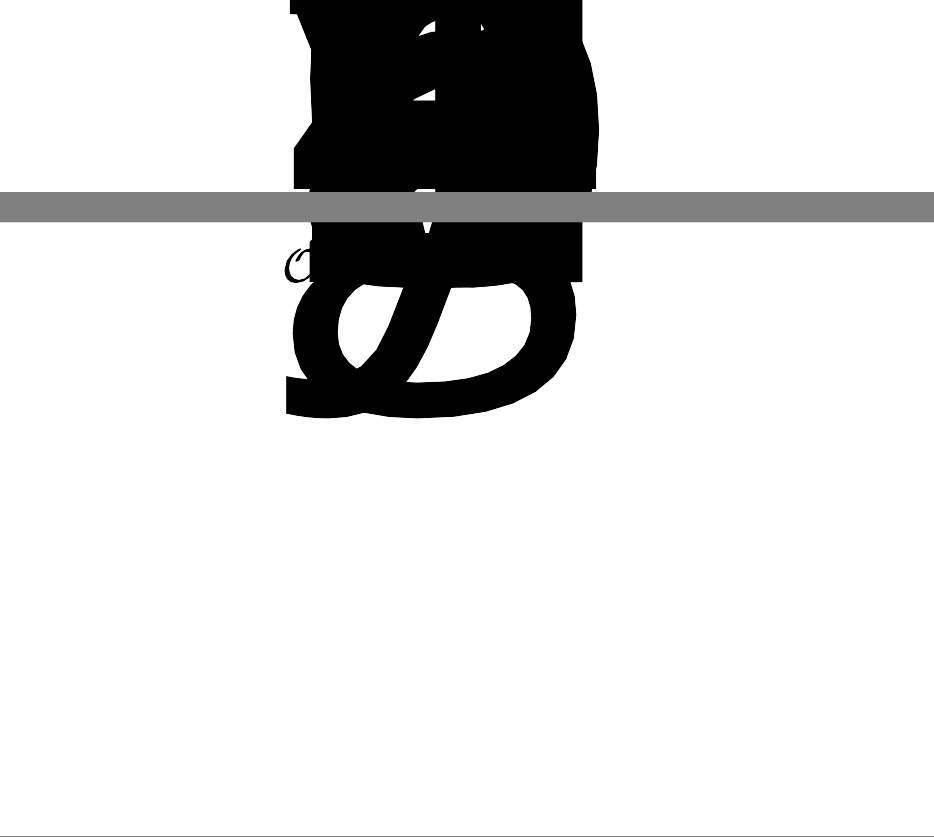
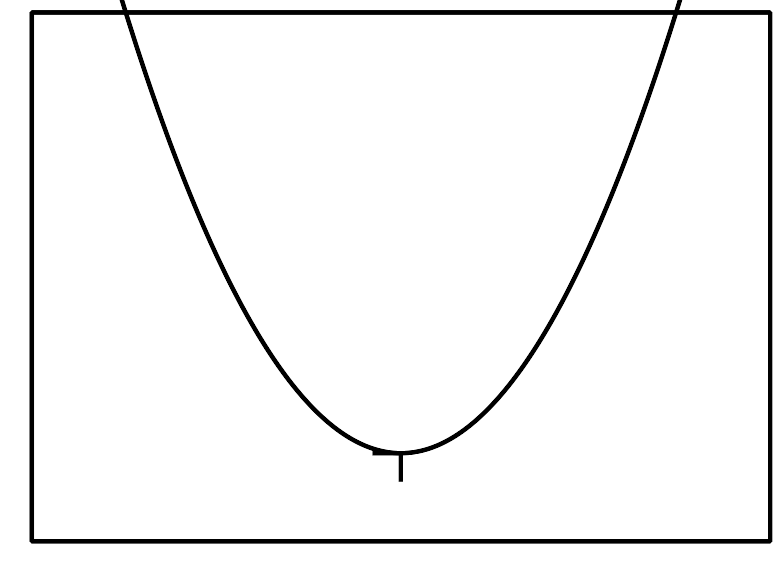
### Lesson 5 Practice Problems

1. The cell phone plan from Company C costs $10 per month, plus $15 per gigabyte for data used. The plan from Company D costs $80 per month, with unlimited data.

* Rule gives the monthly cost, in dollars, of using gigabytes of data on Company C’s plan. Rule gives the monthly cost, in dollars, of using gigabytes of data on Company D’s plan.
  1. Write a sentence describing the meaning of the statement .
  2. Which is less, or ? What does this mean for the two phone plans?
  3. Which is less, or ? Explain how you know.
  4. For what number is ?
  5. Draw the graph of each function.
  + 

1. Function is represented by the graph.

* For what input value or values is ?
* 
  1. 2
  2. -2 and 2
  3. 16
  4. none

1. Function gives the perimeter of an equilateral triangle of side length . It is represented by the equation .
   1. What does mean in this situation?
   2. Find a value of to make the equation true.
2. Function takes a student’s first name for its input and gives the number of letters in the first name for its output.
   1. Describe the meaning of .
   2. Find the value of .

* (From Unit 4, Lesson 2.)

1. gives the weight of a puppy, in pounds, as a function of its age, , in months.

* Describe the meaning of each statement in function notation.
* (From Unit 4, Lesson 3.)

1. Diego is building a fence for a rectangular garden. It needs to be at least 10 feet wide and at least 8 feet long. The fencing he uses costs $3 per foot. His budget is $120.

* He wrote some inequalities to represent the constraints in this situation:
* ​​​​​​
  1. Explain what each equation or inequality represents.
  2. His mom says he should also include the inequality . Do you agree? Explain your reasoning.
* (From Unit 2, Lesson 18.)



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