### 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 $C$ gives the monthly cost, in dollars, of using $g$ gigabytes of data on Company C’s plan. Rule $D$ gives the monthly cost, in dollars, of using $g$ gigabytes of data on Company D’s plan.
	1. Write a sentence describing the meaning of the statement $C(2)=40$.
	2. Which is less, $C(4)$ or $D(4)$? What does this mean for the two phone plans?
	3. Which is less, $C(5)$ or $D(5)$? Explain how you know.
	4. For what number $g$ is $C(g)=130$?
	5. Draw the graph of each function.
	+ 
1. Function $g$ is represented by the graph.
* For what input value or values is $g(x)=4$?
* 
	1. 2
	2. -2 and 2
	3. 16
	4. none
1. Function $P$ gives the perimeter of an equilateral triangle of side length $s$. It is represented by the equation $P(s)=3s$.
	1. What does $P(s)=60$ mean in this situation?
	2. Find a value of $s$ to make the equation $P(s)=60$ true.
2. Function $G$ 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 $G(Jada)=4$.
	2. Find the value of $G(Diego)$.
* (From Unit 4, Lesson 2.)
1. $W$ gives the weight of a puppy, in pounds, as a function of its age, $t$, in months.
* Describe the meaning of each statement in function notation.
	1. $W(2)=5$
	2. $W(6)>W(4)$
	3. $W(12)=W(15)$
* (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:
* $f=2x+2y$​​​​​​
* $x\geq 10$
* $y\geq 8$
* $3f\leq 120$
	1. Explain what each equation or inequality represents.
	2. His mom says he should also include the inequality $f>0$. Do you agree? Explain your reasoning.
* (From Unit 2, Lesson 18.)



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