Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Given this word problem, how would you find the domain and range?

A car can travel 55 miles for each gallon of gasoline. The function d(x) = 55x represents the distance d(x), in miles, that the car could travel with x gallons of gasoline. The car’s fuel tank holds 14 gallons.

**First, we must identify certain words or key phrases within the problem.**

* **­­­­­­**\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – gives us how we find our \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ – what two things have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?
* What are the \_\_\_\_\_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_\_\_\_\_?
* What \_\_\_\_\_\_\_\_\_\_\_\_\_\_ depends on the other?
* Does the problem have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?
	+ - * + Using the function, we can find input and output values.
				+ Can we have negative gallons of gas?
				+ What is the maximum number of gallons that we can have based on the problem?
				+ Is this an example of a discrete or continuous function?
				+ **Domain:**
				+ **Range:**

**SUMMARY**

**Now, let’s find the domain and range of another situation.**

The total cost to rent a car is a function of the number of miles driven. A rental car company charges $0.75 per mile driven plus an initial cost of $35.



1. Function: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Minimum or maximum:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Continuous or Discrete?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Range:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **SUMMARY**