

Name: _____ Date: _____ Per: _____

4.2: Graphing Lines by Making a Table

Focus: Identify Domain and Range

1. You charge \$10 per hour babysitting. Your mother will only let you babysit for 5 hours each week.

a) Create a table to show the amounts of money you can make based on the number of hours you work.

b) Identify the domain and range of the function.

c) Is it possible to make \$75 in one week?

2. You are going to the store to buy school supplies. You need a notebook and some markers. The notebook costs \$3 and each marker costs \$2.

a) Write an equation to represent the total cost based on the number of markers you buy.

b) You only have \$11 to spend. Make a table to show the possible number of markers you can buy.

c) Identify the domain and range of the function.

d) What is the maximum number of markers you can buy?

3. The weight, w (in pounds), of a loaf of bread that a recipe yields is given by the function $w = \frac{1}{2}f$, where f is the number of cups of flour used. You have 4 cups of flour.

a) Make table with at least 5 values to show the possible weights the loaf of bread could be.

b) Identify the domain and range of the function.

c) Is it possible to make a loaf of bread that is 3 pounds given the amount of flour you have? Why or why not?

4. The temperature T , in degrees Celsius, of the Earth's crust can be modeled by the function $T = 20 + 25d$ where d is distance, in kilometers, from the Earth's surface. A scientist plans to study bacteria in the first 4 kilometers.

a) Make table to show the temperatures the scientist will encounter during his study. Include at least five values.

b) What is the temperature at the deepest part of the crust the scientist studies?

c) Identify the domain and range of the function for this information.

d) Another scientist studies organisms in a section of crust where the temperature is 95°C . How many kilometers deep is the section of crust?

e) Which scientist traveled farther?

5. A fashion designer orders fabric that costs \$30 per yard. The designer wants the fabric to be dyed, which costs \$100. The total cost C (in dollars) of the fabric is given by the function $C = 100 + 30f$ where f is the number of yards of fabric.

a) The designer needs up to 3 yards of fabric. Make a table to show the possible total cost. Include at least 4 values.

b) Identify the domain and range of this function.

c) Is it possible for this designer to spend \$140 on fabric? Why or why not?

d) Suppose the designer can spend \$500 on fabric, what is the maximum amount of fabric he can buy?

6. After visiting relatives who live 200 miles, your family drives home at an average speed of 50 miles per hour. Your distance d (in miles) from home is given by $d = 200 - 50t$ where t is time (in hours) spent driving.

a) After traveling for 1.5 hours, have you arrived home? Show or explain how you know.

b) Where will you be in 5 hours?

c) If you left at 8 a.m., what time will you get home?