

Name: _____ Date: _____ Per: _____

1.6 – 1.7: Writing and Graphing Functions

For each problem, do the following:

- a) Identify the independent and dependent variables (Quantities)
- b) Write a function to represent the situation
- c) Make a table of values (choose values that make sense, at least 4 values per table)
- d) Identify domain and range of the function when asked.

1. A special calling plan charges \$0.25 per minute for a phone call to Canada. The first thirty minutes are free. Your function should represent total cost based on the number of **total** minutes used.

2. Lumber for bookshelves costs \$1.50 per linear foot, and there is a \$20 milling charge, no matter how many feet you buy. Your function should represent total cost based on the number of feet purchased.

3. A tablespoon of peanut butter contains 5 grams of protein. A slice of whole wheat bread contains 3 grams of protein. You are making a peanut butter sandwich. Your function should represent total grams of protein based on the amount of tablespoons of peanut butter used.

4. An amusement park ride called the Octopus takes 10 seconds to extend or retract its arm. Each revolution takes 24 seconds. The ride starts by the Octopus extending its arm, rotating around and then retracting its arm. Your function should represent total time based on the number of revolutions.

5. Tom Brady has 2500 frequent-flier miles and his credit card gives him 5 miles for every dollar he charges on his card. Your function should represent total miles based on the number of dollars charged.

6. The talk radio station “Sports Hub”, airs commercials for any time not used for discussion with hosts or callers. Commercial time on the station costs \$800 per minute. Your function should represent total cost based on the number of minutes of available for commercial time in one hour. Identify the domain and range of the function.

7. A jetliner cruises at an altitude of 37,000 feet. During the initial phase of its descent, the plane loses 300 feet per minute. Your function should represent the planes altitude based on the number of minutes it has been descending. Identify the domain and range of the function.

8. A major appliance company charges \$38 for a house call and \$26 per hour for time spent repairing an appliance. Your function should represent total cost based on the number of hours needed for the repair. Assuming the repair-man can work up to 10 hours in one day, identify the domain and range of the function.

9. Joon Hee bought some contains of yogurt in a supermarket for \$0.65 each. He has \$20 to spend. Your function should represent the amount of change he will receive based on the number of containers he buys. Identify the domain and range of the function.