Name: _____ Date: _____

BLM 6–2

Chapter 6 Prerequisite Skills

Show all your work.

1. Express each ratio as a decimal number and as a percent.

a) $\frac{1}{2}$

b) $\frac{3}{5}$

c) $\frac{7}{3}$

d) $\frac{12}{4}$

2. What is the unit rate in each scenario?

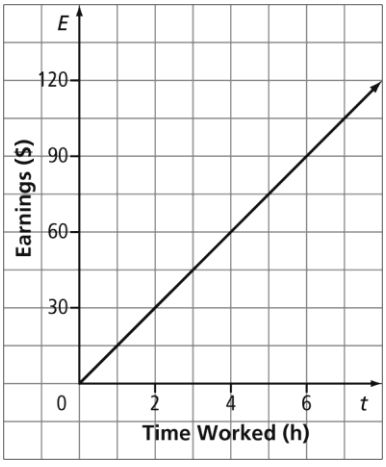
a) A car travels 324 km in 3 h.

b) A hiker reaches a height of 800 m while walking for 5 km.

c) A submarine dives to a depth of 450 m in 9 min.

3. A 12-m tree casts a shadow that is 4.1 m long. What is the height of a fence post that casts a shadow that is 0.68 m long?

4. The graph shows the relationship between earnings and time.



a) Copy the table. Use the graph to help you complete the table.

Time Worked, *t* (h)	Earnings, *E* ($)
2	
	60
6	
	105

b) What are the coordinates where the graph intersects the vertical axis? What is the meaning of this point?

5. A plumber charges $65 for any part of the first hour of a repair call and $45 for every additional hour. This relation is shown in the table.

Time Worked, *t* (h)	Cost, *C* ($)
1	65
2	110
3	155

a) Graph the relation.

b) What is the repair cost for a 6-h job?

c) What is the linear equation for the graph?

6. Solve and check.

a) $2.68 = \frac{y}{3}$

b) $\frac{t}{1.6} + 5.9 = -3.2$

c) $-\frac{5}{6} = \frac{r-4}{3}$

d) $\frac{1}{5}n + \frac{3}{2} = \frac{3}{10}n$

7. Rubin works at a football stadium selling hotdogs. He is paid $8/h plus $0.75 commission for every hotdog he sells.

a) How much does Rubin make if he sells 35 hotdogs in 3 h?

b) How many hotdogs would he have to sell to earn $68 in 4 h?