

Do the following problems on a piece of binder paper. For problems with graphs complete the graph on this page and the rest of the problem on your binder paper. Label each problem with the problem name written in bold at the start of the problem.

Name _____ Date _____ Period _____

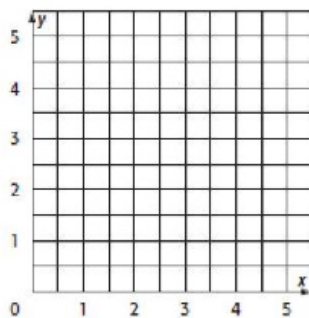
Math 7 Chapter 1 Review

TRAVEL During Tracy's trip across the country, she traveled 2,884 miles. Her trip took 7 days. Find a unit rate to represent the average miles she traveled per day during the trip.

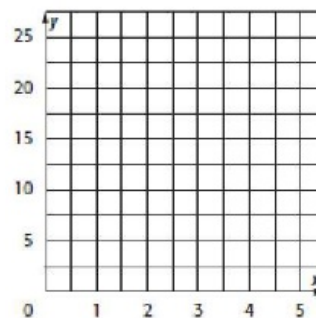
*SHE TRAVELED 12 MILES IN 2 DAYS
6 MILES PER DAY $\frac{12}{2}$ $\frac{\text{MILES}}{\text{DAYS}}$*

CARPETING Hana paid \$1,200 for the carpet in her living room. The room has an area of 251.2 square feet. What was her unit cost of carpeting in dollars per square foot? Round to the nearest cent.

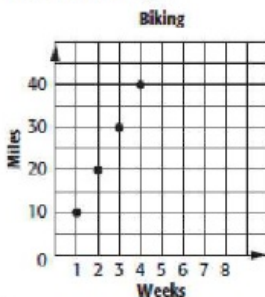
BAKING Rachel baked 3 cakes in 2 hours, 4 cakes in 3 hours, and 5 cakes in 4 hours. Determine whether the number of cakes baked is proportional to the number of hours.



PROFIT If Stephanie sells 3 necklaces, she earns a profit of \$5. If she sells 4 necklaces, her profit is \$10. Five necklaces sold gives her a profit of \$15 and six necklaces sold gives her a profit of \$20. Determine whether the amount of profit is proportional to the number of necklaces sold.



BIKING The graph represents how far Toby biked given the number of weeks he has been biking. Find the constant rate of change.



GROWTH Jaz was 43 inches tall. Eighteen months later, she was 52 inches tall. Find the constant rate of change for Jaz's height.

*JOEY IS 3 FT TALL
2 YEARS LATER JOEY IS 5 FT TALL
 $5 \text{ FT} - 3 \text{ FT} = 2 \text{ FT CHANGE IN 2 YRS}$*

$\frac{1 \text{ FT}}{2 \text{ YRS}}$

UNIT RATE

TRACY

2884 MILES IN 7 DAYS

200 MILES IN 4 DAYS

$$\frac{200 \text{ MILES}}{4 \text{ DAYS}} = \frac{50 \text{ MILES}}{1 \text{ DAY}}$$

$$200(1) = 4x$$

$$\frac{200}{4} = \frac{4x}{4}$$

$$50 \text{ MILES} = x$$

COEFFICIENT
↓

10 MILES IN 2 DAYS

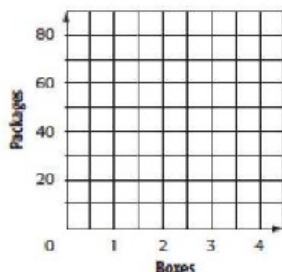


$$\frac{10}{2} = 5$$

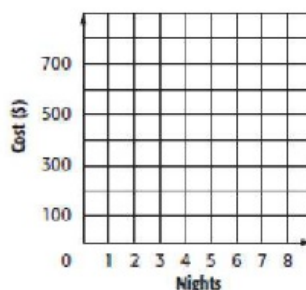
$$\frac{2884 \text{ MILES}}{7 \text{ DAYS}} = 412 \text{ MILES PER DAY}$$

RAISINS The table shows the number of packages of raisins per box. Graph the data. Then find the slope of the line. Explain what the slope represents.

Packages	20	40	60	80
Boxes	1	2	3	4



RESORT The Snells can spend 4 nights at a resort for \$500 or 6 nights at the same resort for \$750. Graph the data. Then find the slope. Explain what the slope represents.

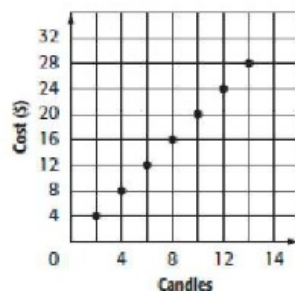


WEDDING FAVORS Lucius is making favors for his sister's wedding. If supplies for 25 favors cost \$62.50, how much do supplies for 60 favors cost?

$\frac{6}{3}$
 \$6 FOR 3 WEDDING FAVORS
 X FOR 1 WEDDING FAVOR \$2
 How much FOR 10 WEDDING FAVORS \$20

UNIT RATE

CANDLES The number of votive candles varies directly as the price. What is the ratio of candles to dollars?



(x) CANDLES	(y) COST
2	4
4	8
6	12
8	16

$\frac{\text{CANDLES}}{\text{DOLLARS}} = \frac{2}{4} = \frac{1}{2}$

$$\frac{6}{12} = \frac{1}{2}$$

$$\frac{4}{8} = \frac{1}{2}$$

SHELVES A bookshelf holds 43 books on each shelf. Is the total number of books proportional to the number of shelves in the bookshelf?

SHELVES	BOOKS
1	43
2	86
x	43x

FISH Of the 50 fish that Alan caught from the lake, 14 were trout. The estimated population of the lake is 7,500 fish. About how many trout would you expect to be in the lake?

CARPETING Hana paid \$1,200 for the carpet in her living room. The room has an area of 251.2 square feet. What was her unit cost of carpeting in dollars per square foot? Round to the nearest cent.

RECREATION An outdoor swimming pool costs \$8 per day to visit during the summer. There is also a \$25 yearly registration fee. Is the total cost proportional to the total number of days visited?

FISH

CAUGHT 50 FISH

14 WERE TROUT

TOTAL FISH = 7500

TOTAL TROUT = X

$$\frac{\text{TROUT}}{\text{FISH}} = \frac{14}{50} = \frac{X}{7500} = 2100$$

$$\frac{14}{50} = 0.28$$

$$\frac{2100}{7500} = 0.28$$

$$\frac{3}{5} \neq \frac{9}{14}$$

$$9(5) = 45$$

$$3(14) = 42$$