

RATES AS COMPARISONS

A travel agent is preparing three different car rental quotes for her customer, as shown in the tables below.

THRIFTY VOYAGE

# OF DAYS	TOTAL COST
3	\$109.50
5	\$182.50
8	\$292.00
9	\$328.50

COST FOR 1 DAY: _____

FRUGAL RIDE

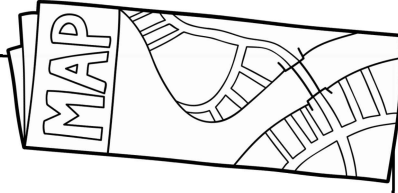
# OF DAYS	TOTAL COST
2	\$71.50
4	\$143.00
7	\$250.25
8	\$286.00

COST FOR 1 DAY: _____

VALUE VEHICLES

# OF DAYS	TOTAL COST
3	\$111.00
5	\$185.00
7	\$259.00
9	\$333.00

COST FOR 1 DAY: _____



a. What is the cost of renting a car for 10 days from Thrifty Voyage, Frugal Ride, and Value Vehicles?

b. Which car rental shop is the best value for a 10-day rental?

TYPES OF RATES

- Rates can be useful in comparing different _____ so that problems can be solved.
- Rates can be solved using tape diagrams or proportions, just like ratios.

Ex: _____

Use your understanding of rates to answer the questions below.

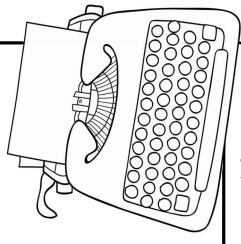
1. A manufacturing line can produce 15 widgets in 2 minutes. How many widgets can the line produce in 30 minutes?

2. A dripping faucet leaks 10 mL in 3 minutes. How many minutes will it take to produce 140 mL of water?

Use your understanding of rates to answer the questions below.

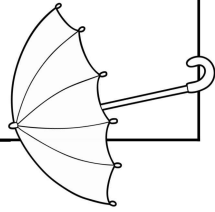
3. A twelve-pack of orange soda is priced at \$3.00. A six-pack is priced at \$1.75. Which is the better value?

4. Anna can type 123 words in 3 minutes. Caroline can type 220 words in 5 minutes. Who can type the fastest?



5. Mae read a 403-page book in 13 hours. At this rate, how long will it take her to read a 248-page book?

6. During a thunderstorm, the local news reports rainfall at $\frac{1}{2}$ of an inch per hour. How much rain will fall if it continues for 8 hours? Use the tape diagram below.

A simple black-outlined rectangle intended for drawing a tape diagram to solve the problem.

Apply your understanding of rates to answer the questions below.

7. A contractor has 12 gallons of paint which will cover 2,712 square feet. Which of the following rates best represents the relationship between the number of square feet and the number of gallons of paint?

- A. 226 gallons of paint per square foot
- B. 2,712 gallons of paint per square foot
- C. 226 square feet per gallon of paint
- D. 12 square feet per gallon of paint

8. Northside High School is having a spaghetti dinner fundraiser. In order to advertise, students place flyers on neighborhood doors. Margie hands out 100 flyers in 2 hours. Jaxon hands out 18 flyers in 15 minutes. Which equation can be used to determine f , the number of flyers Jaxon handed out in two hours?

- A. $\frac{18}{15} = \frac{f}{2}$
- B. $\frac{120}{f} = \frac{2}{15}$
- C. $\frac{18}{2} = \frac{f}{120}$
- D. $\frac{120}{15} = \frac{f}{18}$

RATES AS COMPARISONS

Solve each of the questions in the left column. Then, draw a straight line to the solution in the right column. After all of the questions have been completed, unscramble the remaining letters to form the name of a mystery character.

<p>1. A bag of popcorn contains 483 calories and serves 3.5 people. How many calories are in each serving?</p>	<p>S A G</p>	<p>336</p>
<p>2. The movie theater sold 56 boxes of gummy bears during the week. At this rate, how many boxes of gummy bears will the movie theater sell in a 6-week period?</p>	<p>E B M</p>	<p>52.5</p>
<p>3. A postal carrier can deliver to 130 houses in a 2.5-hour period. At this rate, how many hours will it take to deliver to 312 houses?</p>	<p>A Q D V</p>	<p>16</p>
<p>4. A gym membership is advertised to cost \$630 per year. What is the cost per month of the gym membership?</p>	<p>R J R O</p>	<p>138</p>
<p>5. A train travels 16 miles in 20 minutes. At this rate, how many minutes will it take to travel 12 miles?</p>	<p>T R E</p>	<p>15</p>
<p>6. A dozen eggs costs \$3.84. At this rate, how much would 50 eggs cost?</p>	<p>W M T</p>	<p>6</p>

MYSTERY CHARACTER: