

Using Unit Rates to Compare Ratios

► Solve each problem. Show your work.

- 1 Shawn sells 36 vehicles in 4 weeks. Brett sells 56 vehicles in 7 weeks. Who sells more vehicles per week?

- 2 The table shows the gas mileage of two vehicles. Which vehicle travels more miles per gallon?

Car	Miles	Gallons
Pickup Truck	120	8
Minivan	180	10

- 3 Joe and Chris each have a lawn mowing business. Joe charges \$40 to mow 2 acres. Chris charges \$30 to mow 1.2 acres. Who charges more per acre?

- 4 The table shows the time it took two athletes to run different races. Who ran faster?

Athlete	Seconds	Meters
Ellen	28	200
Lindsay	60	400

Using Unit Rates to Compare Ratios *continued*

- 5 Branden and Pete each play running back. Branden carries the ball 75 times for 550 yards, and Pete has 42 carries for 380 yards. Who runs farther per carry?

- 6 The table shows the price of two cereal brands and the number of ounces per box. Which is the better price per ounce?

Cereal	Ounces	Price
Brand A	18	\$2.50
Brand B	24	\$3.50

- 7 Describe two different ways you could change the values in the table so that the answer to problem 6 is different.

Using Unit Rates to Convert Measurements

► Solve each problem. Show your work.

- 1 Susan has a 12-inch board for constructing a wooden chair. The directions say to use a board that is 29 centimeters long. Is her board long enough to cut?
(1 inch = 2.54 centimeters)

- 2 Kevin uses 84 fluid ounces of water to make an all-purpose cleaner. The directions call for 4 fluid ounces of concentrated soap for every 3 cups of water. How many fluid ounces of soap should he use? (1 cup = 8 fl oz)

- 3 Shannon test-drives a car in Germany and drives 95 kilometers per hour. What is her speed in miles per hour? (1 kilometer \approx 0.62 mile)

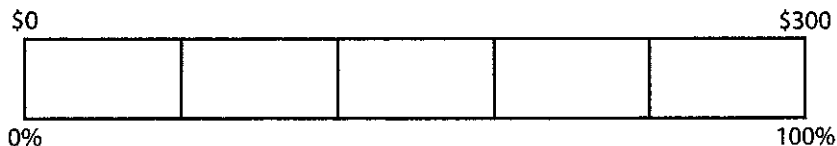
- 4 Keith works 8 hours per day for 5 days per week. Melba works 2,250 minutes each week. Who spends more time at work?

Using Unit Rates to Convert Measurements *continued*

- 5 Jason runs 440 yards in 75 seconds. At this rate, how many minutes does it take him to run a mile? (1 mile = 1,760 yards)
- 6 Boxes of granola are on sale at a price of 2 for \$4.50. There are 12 ounces of granola in each box. What is the unit price in dollars per pound?
- 7 Sam is delivering two refrigerators that each weigh 105 kilograms. There is an elevator with a weight limit of 1,000 pounds. Can he take both refrigerators on the elevator in one trip? (1 kilogram \approx 2.2 pounds)
- 8 For every 140 feet that Kelly rides on her bicycle, the wheels turn 20 times. About how many times do the wheels turn in 5 miles? (1 mile = 5,280 feet)

Understanding Percents

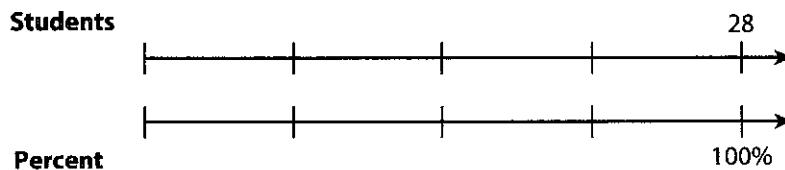
- 1 Emma is saving for a bicycle that costs \$300. This month, she reaches 60% of her goal. Label and shade the bar model to show her progress. How much money has she saved? Explain.



- 2 Justin needs to make 80 illustrations for an art book. He has made 40% of the illustrations. Make a bar model to show his progress. How many illustrations does he still need to make? Explain.

- 3 In a classroom of 28 students, 75% of the students have met their reading goal.

Label the double number line. How many students met their reading goal? What fraction of 28 students met their reading goal? Explain.



Finding a Percent of a Quantity

➤ Find the percent of the number. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1 40% of 80

2 25% of 60

3 10% of 90

4 50% of 70

5 80% of 500

6 75% of 80

7 90% of 250

8 65% of 400

9 85% of 800

10 55% of 140

11 45% of 160

12 95% of 180

13 70% of 720

14 15% of 220

15 65% of 200

Answers

9	77	504	72	225
260	171	33	60	35
400	32	130	680	15

Finding the Whole

► Solve each problem.

1 25% of what number is 13?

3 10% of what number is 60?

5 30% of what number is 72?

7 95% of what number is 57?

9 85% of what number is 102?

2 50% of what number is 140?

4 5% of what number is 12?

6 70% of what number is 56?

8 75% of what number is 66?

10 45% of what number is 63?

11 Explain how you could use 25% of a number to find the number.