

UNIT 3

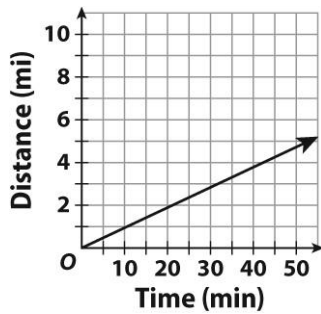
Applying Ratios and Rates

Study Guide

1. The ratio of boys to girls in Anya's class is 10 to 15. There are 20 boys. How many girls are there?

- A 25
- B 30
- C 40

2.



The graph above shows Tomasso's rate while jogging. Which of the following is an ordered pair on the graph?

- A (10, 1)
 - B (15, 3)
 - C (30, 5)
3. Connor bought a pack of 4 notebooks for \$8.20. What was the unit price?

- A \$2.00
- B \$2.05
- C \$4.20

4. On a certain road map, the scale is 1 inch = 10 miles. Aurora Springs and Glendale are 3 inches apart on the map. What is the actual distance between Aurora Springs and Glendale?

- A 3 mi
- B 13 mi
- C 30 mi

5. The distance from the post office to the supermarket is 0.5 km. What is the distance in meters?

- A 5 m
- B 50 m
- C 500 m

6. Which of the following is equal to the product of 2 and $\frac{1}{4}$?

- A $\frac{1}{2}$
- B $\frac{9}{4}$
- C 8

7. Gretchen earns \$7 per hour at the local pizza shop. If she works 3 hours in an afternoon, how much money does she earn?

- A \$10
- B \$21
- C \$73

8. Delia can buy 3 sweatshirts for a total of \$30. How much would it cost if she were to buy 4 sweatshirts at the same price?

- A \$40
- B \$120
- C \$50

9. A foot is 12 inches long. If an inch is about 2.54 centimeters long, how many centimeters are in a foot?

- A 2.54 cm
- B 14.54 cm
- C 30.48 cm

MODULE
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Applying Ratios and Rates

10. Nandeville and Henningsburg are 10 miles apart. On a map, the two cities are 2 inches apart. How many miles does 1 inch represent on the map?

11. Latisha’s water bottle can hold 0.3 liters. How many milliliters can it hold?

12. A factory can produce 20 machines in 1 hour. On weekdays, the factory operates for 8 hours per day. How many machines can the factory produce in 1 weekday?

13. Briana took a train that travels at a speed of 30 miles per hour. The table below shows the distance the train has traveled at different times since beginning its trip.

Time (h)	Distance (mi)
0	0
1	30
2	
	90

Fill in the missing values to complete the table.

14. Paulina rode her bike 1.5 km. How many meters did she ride her bike?

15. What is the absolute value of -5 ?

16. Kevin pays \$7 per hour to rent a bicycle. If he rents the bicycle for 5 hours, how much will he pay for the rental?

17. Erin bought 2 pounds of apples at the supermarket. How many kilograms of apples did she buy?

18. There are 10 red marbles and 20 green marbles in a bag. Colleen says the ratio of red marbles to green marbles is 10 to 20. Fritz disagrees and says the ratio is 1:2. Which student is correct? Explain your answer.

19. Dora cut a piece of string that is 33 centimeters long. What is the length of the piece of string in meters?

20. What is the sum of $\frac{1}{7}$ and $\frac{2}{7}$?

21. Fiona’s laptop computer weighs 2.5 kilograms. What is the weight of the computer in grams?

ANSWER KEY

1. B
2. A
3. B
4. C
5. C
6. A
7. B
8. A
9. C
10. 5 mi
11. 300 mL
12. 160 machines

13.

Time (h)	Distance (mi)
0	0
1	30
2	60
3	90

- 14.
15. 5
16. \$35
17. 0.908 kg
18. Both students are correct; 10:20 and 1:2 are equivalent ratios.
19. 0.33 m
20. $\frac{3}{7}$
21. 2,500 g