

Proportional Relationships
Ratios and Proportions

7.1.1 Ratios and Rates

Use the table to write each ratio.

1. Redbirds to Blue Socks

	Redbirds	Blue Socks
Left-Handed Batters	8	3
Right-Handed Batters	11	19

2. right-handed Blue Socks to left-handed Blue Socks

3. left-handed Redbirds to total Redbirds

4. Write three equivalent ratios to compare the number of stars in the picture with the number of stripes.



5. Gina charges \$28 for 3 hours of swimming lessons. Hector charges \$18 for 2 hours of swimming lessons. Which instructor offers a better deal?

Proportional Relationships

Ratios and Proportions

6. **Consumer Math** A 12-pound bag of dog food costs \$12.36. A 15-pound bag of dog food costs \$15.30. Which is the better deal?

7.1.2 Applying Rates and Ratios

Use a table to find three equivalent ratios or rates.

7. $\frac{200 \text{ meters}}{2 \text{ minutes}}$

8. 8 to 15

9. $\frac{12}{4}$

10. 6 to 7

11. $\frac{13}{20}$

12. 11:25

13. $\frac{\$2400}{1 \text{ month}}$

14. $\frac{51}{75}$

15. Donnette's heart rate while exercising is $\frac{128 \text{ beats}}{1 \text{ minute}}$. Nate's heart rate is $\frac{272 \text{ beats}}{2 \text{ minutes}}$, and Leslin's heart rate is $\frac{384 \text{ beats}}{3 \text{ minutes}}$. Whose heart rate is the same as Donnette's?

16. Lee Middle School orders 15 textbooks for every 12 students. The table shows how many textbooks the school orders for certain numbers of students. Predict the number of textbooks that the school would order for 72 students.

Students	12	24	48	96	192
Textbooks	15	30	60	120	240

Proportional Relationships

Ratios and Proportions

7.1.3 Proportions

17. Zed buys a sports magazine each month for 3 months and spends \$18. How much will Zed spend if he buys the same sports magazine every month for 12 months?
18. Morgan bought 3 pounds of cheese for a party platter for \$27. How many pounds of the same cheese can Morgan buy with \$54?

Find the missing value in each proportion.

19. $\frac{3}{2} = \frac{24}{d}$

20. $\frac{p}{40} = \frac{3}{8}$

21. $\frac{6}{14} = \frac{x}{7}$

22. $\frac{5}{p} = \frac{7}{77}$

23. According to Ty's study guidelines, how many minutes of science reading should he do if his science class is 90 minutes long?

Ty's Study Guidelines	
Class	Reading Time
Literature	35 minutes for every 50 minutes of class time
Science	20 minutes for every 60 minutes of class time
History	30 minutes for every 55 minutes of class time