Name _____ Core ____ Date _____

5 Chapter Review

Check It Out
Vocabulary Help
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Review Key Vocabulary

ratio, *p. 192*
equivalent ratios, *p. 198*
ratio table, *p. 198*
rate, *p. 206*
unit rate, *p. 206*
equivalent rates, *p. 206*
percent, *p. 220*
U.S. customary system, *p. 234*
metric system, *p. 234*
conversion factor, *p. 234*
unit analysis, *p. 234*

Review Examples and Exercises

5.1 Ratios *(pp. 190–195)*

Write the ratio of apples to oranges. Explain what the ratio means.

3 apples → 3 to 5 ← 5 oranges

∴ So, the ratio of apples to oranges is 3 to 5, or 3 : 5. That means that for every 3 apples, there are 5 oranges.

Exercises

Write the ratio. Explain what the ratio means.

1. butterflies : caterpillars

2. saxophones : trumpets

_____ _____

_____ _____

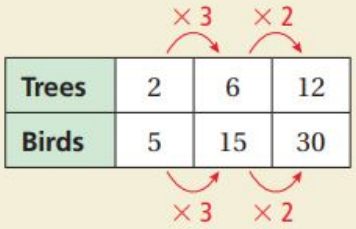
_____ _____

5.2 Ratio Tables *(pp. 196–203)*

Find the missing values in the ratio table. Then write the equivalent ratios.

You can use multiplication to find the missing values.

Trees	2	6	
Birds	5		30



∴ The equivalent ratios are 2 : 5, 6 : 15, and 12 : 30.

Exercises

Find the missing values in the ratio table. Then write the equivalent ratios.

3.

Levers	6		18
Pulleys	3	6	

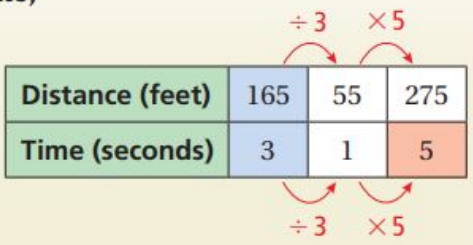
4.

Cars	3	6	
Trucks	4		24

5.3 Rates *(pp. 204–209)*

A horse can run 165 feet in 3 seconds. At this rate, how far can the horse run in 5 seconds?

Using a ratio table, divide to find the unit rate. Then multiply to find the distance that the horse can run in 5 seconds.



∴ So, the horse can run 275 feet in 5 seconds.

Exercises

Write a unit rate for the situation.

5. 12 stunts in 4 movies

6. 3600 stitches in 3 minutes

7. **MUSIC** A song has 28 beats in 4 seconds. At this rate, how many beats are there in 30 seconds?

_____

5.4 Comparing and Graphing Ratios *(pp. 210–215)*

There are 24 grams of sugar in 6 fluid ounces of Soft Drink A, and there are 15 grams of sugar in 4 fluid ounces of Soft Drink B. Which soft drink contains more sugar in a 12-ounce can?

Use ratio tables to compare the soft drinks.

Soft Drink A

		×2	
Sugar (grams)	24	48	
Volume (fluid ounces)	6	12	
		×2	

Soft Drink B

		×3	
Sugar (grams)	15	45	
Volume (fluid ounces)	4	12	
		×3	

The tables show that a 12-ounce can of Soft Drink A has $48 - 45 = 3$ more grams of sugar than Soft Drink B.

∴ So, a 12-ounce can of Soft Drink A has more sugar.

Exercises

8. **TUNA** A 5-ounce can of tuna costs $0.90. A 12-ounce can of tuna costs $2.40. Which is the better buy?

Explain. _____

_____

_____

_____

_____

5.5 Percents *(pp. 218–223)*

Write $\frac{3}{20}$ as a percent.

$$\frac{3}{20} \overset{\times 5}{=} \frac{15}{100} = 15\%$$

Because $20 \times 5 = 100$, multiply the numerator and denominator by 5. Write the numerator with a percent symbol.

Exercises

Write the percent as a fraction or mixed number in simplest form.

9. 12%

10. 88%

11. 0.8%

Write the fraction or mixed number as a percent.

12. $\frac{3}{5}$

13. $\frac{43}{25}$

14. $1\frac{21}{50}$

5.6 Solving Percent Problems *(pp. 224–231)*

a. 75% of 80 is what number?

$75\% \text{ of } 80 = \frac{3}{4} \times 80 = \frac{3 \times 80^{20}}{1 \not{4}} = 60$

∴ So, 75% of 80 is 60.

b. 30% of what number is 27?

$27 \div 30\% = 27 \div \frac{3}{10} = 27^{9} \not{} \cdot \frac{10}{\not{3}_{1}} = 90$

∴ So, 30% of 90 is 27.

Find the percent of the number. Explain your method.

15. 60% of 80 _____

16. 80% of 55 _____

17. 150% of 48 _____

Find the whole. Explain your method.

18. 70% of what number is 35? _____

19. 140% of what number is 56? _____

5.7 Converting Measures *(pp. 232–237)*

Convert 8 kilometers to miles.

$$8 \text{ km} \times \frac{1 \text{ mi}}{1.6 \text{ km}} \approx 5 \text{ mi}$$

Because 1 mi ≈ 1.6 km, use the ratio $\frac{1 \text{ mi}}{1.6 \text{ km}}$.

Exercises

Copy and complete the statement. Round to the nearest hundredth if necessary.

20. 3 L ≈ ____ qt

21. 9.2 in. ≈ ____ cm

22. 15 lb ≈ ____ kg