

4 Chapter Review

Review Key Vocabulary

percent, *p.* 150

Review Examples and Exercises

4.1 Percents and Fractions (pp. 148–153)

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

$$\begin{array}{ccc} & \times 5 & \\ & \curvearrowright & \\ \frac{3}{20} & = & \frac{15}{100} \\ & \curvearrowleft & \\ & \times 5 & \\ & = 15\% & \end{array}$$

$20 \times 5 = 100$. So, multiply the numerator and denominator by 5.

Write the numerator with a percent symbol.

∴ So, $\frac{3}{20}$ is 15%.

Exercises

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

1. 12%

2. 88%

3. 0.4%

Write the fraction as a percent.

4. $\frac{4}{5}$

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

6. $\frac{21}{50}$

4.2 Percents and Decimals (pp. 154–159)

a. Write 64% as a decimal.

$$64\% = \underbrace{64.}_{\text{}}\% = 0.64$$

b. Write 0.023 as a percent.

$$0.023 = \underbrace{0.023}_{\text{}} = 2.3\%$$

Exercises

Write the percent as a decimal. Use a model to check your answer.

7. 76%

8. 6%

9. 334%

Write the decimal as a percent. Use a model to check your answer.

10. 0.15

11. 1.24

12. 0.097

4.3

Comparing and Ordering Fractions, Decimals, and Percents

(pp. 160–165)

- a. Which is greater, $\frac{9}{10}$ or 88%?

Write $\frac{9}{10}$ as a percent: $\frac{9}{10} = \frac{90}{100} = 90\%$

∴ 88% is less than 90%. So, $\frac{9}{10}$ is the greater number.

- b. Use a number line to order 0.39, 31%, and $\frac{8}{25}$ from least to greatest.

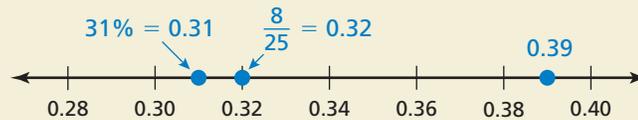
Write 31% and $\frac{8}{25}$ as decimals.

$$31\% = \underbrace{31.}_{\text{}}\% = 0.31$$

$$\frac{8}{25} = \frac{32}{100} = 0.32$$

× 4

× 4



∴ From least to greatest, the order is 31%, $\frac{8}{25}$, and 0.39.

Exercises

Tell which number is greater.

13. $\frac{1}{2}$, 52%

14. $\frac{12}{5}$, 245%

15. 0.46, 43%

16. 0.023, 22%

Use a number line to order the numbers from least to greatest.

17. $\frac{41}{50}$, 0.83, 80%

18. $\frac{9}{4}$, 220%, 2.15

19. 0.67, 66%, $\frac{2}{3}$

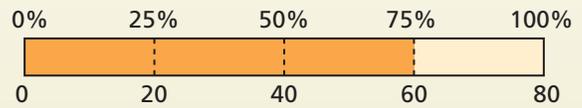
20. 0.88, $\frac{7}{8}$, 90%

21. **FRUIT** Students are asked to name their favorite fruit. Of the responses, 0.32 are apple, 25% are banana, $\frac{7}{20}$ are orange, and 0.08 are *other*. What fruit is the students' favorite?

4.4 Finding the Percent of a Number (pp. 168–173)

a. Find 75% of 80. Use a fraction.

$$\begin{aligned}75\% \text{ of } 80 &= \frac{3}{4} \times 80 \\ &= \frac{3 \times \overset{20}{\cancel{80}}}{\underset{1}{\cancel{4}}} \\ &= 60\end{aligned}$$



∴ 75% of 80 is 60.

b. Find 30% of 90. Use a decimal.

$$30\% \text{ of } 90 = 0.3 \times 90 = 27$$

∴ 30% of 90 is 27.

Exercises

Find the percent of the number.

22. 60% of 80

23. 80% of 55

24. 74% of 25

25. 35% of 65

4.5 Percents and Estimation (pp. 174–179)

Estimate 24% of 58.

24% is close to 25%, or $\frac{1}{4}$. For 58, use the compatible number 60.

$$\begin{aligned}24\% \text{ of } 58 \\ \downarrow \quad \downarrow \\ 25\% \text{ of } 60 &= \frac{1}{4} \times 60 \\ &= 15\end{aligned}$$



∴ So, 24% of 58 is about 15.

Exercises

Estimate the percent of the number.

26. 49% of 32

27. 41% of 89

28. 66% of 48

29. 89% of 17

30. **PIZZA PARTY** About 79% of your class voted to have a pizza party on the last day of school. Your class has 31 students. Estimate how many students voted to have a pizza party.