

Pg 136

Q# 13, 14, 20

To Solve:

A) Create Equivalent Fractions

↳ Use words to create: $\frac{\text{IS}}{\text{OF}}$

↳ Cross Multiply to Solve!

E.G. (#16 in textbook)

$$\frac{\text{is gold}}{\text{of sample}} = \frac{12\text{g}}{2700\text{g}}$$

$$\frac{\text{what}}{\text{Percent}} = \frac{x}{100}$$

$$\frac{12}{2700} \times \frac{x}{100} \Rightarrow 1200 = 2700x$$

$$\frac{1200}{2700} = \frac{2700x}{2700}$$

$$\frac{4}{9} = \frac{12}{27} = x$$

$$0.4\% = x \quad (\text{OR}) \quad \frac{4}{9}\%$$

7. Change each decimal to a percent and a fraction.

- a) 0.256 b) 0.0005 c) 6.5

For help with #8 and #9, refer to Example 3 on page 133.

8. Convert each percent to a decimal and a fraction.

- a) 248% b) 0.56% c) $75\frac{3}{4}\%$

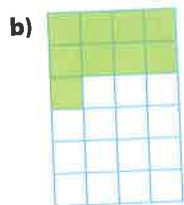
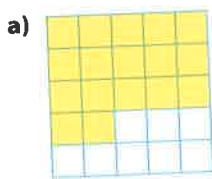
9. Express each percent as a decimal and a fraction.

- a) $5\frac{9}{10}\%$ b) 550% c) 0.8%

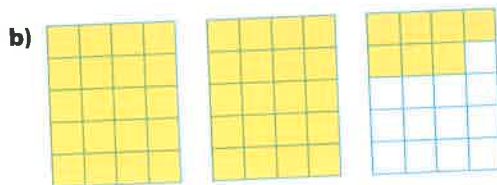
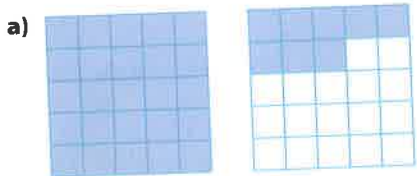
10. Copy and complete the following table. The first row is completed for you.

| Percent | Fraction | Decimal |
|----------|-------------------|---------|
| 165% | $\frac{165}{100}$ | 1.65 |
| a) 230% | | |
| b) 0.38% | | |
| c) 19.9% | | |

11. Express the shaded portion of each diagram as a fraction, a decimal, and a percent.



12. If one completely shaded grid represents one whole, express the shaded portion of each diagram as a fraction, a decimal, and a percent.



Apply

For help with #13 and #14, refer to Example 4 on page 134.

13. Several years ago Claire bought the first issue of a popular comic book for \$10. At a recent auction, it sold for \$200. What percent is the new value of the comic book of the price several years ago?

14. A snack contains 0.9 g of fat. Suppose that in one day, Shaun consumed a total of 40 g of fat, including the snack. What percent of Shaun's total fat consumption does the snack represent? What is this percent as a decimal and as a fraction?

15. Use hundred grids to help place the following numbers in ascending order. 145% , $\frac{5}{8}\%$, 1.32, 0.65, 33.5%, 0.6%

16. A miner found 12 g of gold in a 2700-g sample of ore. What percent of the sample is gold, to the nearest tenth of a percent? What is the percent as a repeating decimal and as a fraction in lowest terms?

Literacy Link

A repeating decimal contains a digit or group of digits that repeat forever. You can write a repeating decimal using bar notation.
 $0.33333\dots = 0.\overline{3}$ $0.454545\dots = 0.\overline{45}$

7. Change each decimal to a percent and a fraction.

- a) 0.256 b) 0.0005 c) 6.5

For help with #8 and #9, refer to Example 3 on page 133.

8. Convert each percent to a decimal and a fraction.

- a) 248% b) 0.56% c) $75\frac{3}{4}\%$

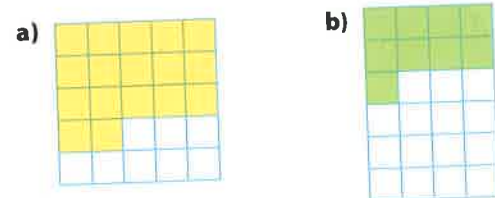
9. Express each percent as a decimal and a fraction.

- a) $5\frac{9}{10}\%$ b) 550% c) 0.8%

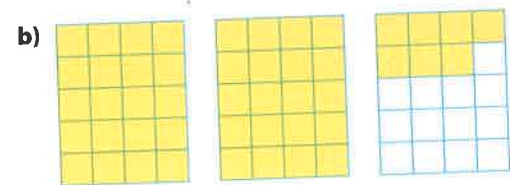
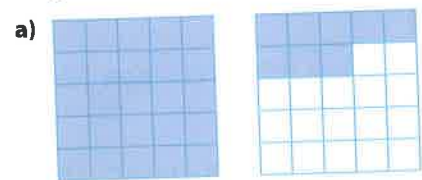
10. Copy and complete the following table. The first row is completed for you.

| Percent | Fraction | Decimal |
|----------|-------------------|---------|
| 165% | $\frac{165}{100}$ | 1.65 |
| a) 230% | | |
| b) 0.38% | | |
| c) 19.9% | | |

11. Express the shaded portion of each diagram as a fraction, a decimal, and a percent.



12. If one completely shaded grid represents one whole, express the shaded portion of each diagram as a fraction, a decimal, and a percent.



Apply

For help with #13 and #14, refer to Example 4 on page 134.

13. Several years ago Claire bought the first issue of a popular comic book for \$10. At a recent auction, it sold for \$200. What percent is the new value of the comic book of the price several years ago?

14. A snack contains 0.9 g of fat. Suppose that in one day, Shaun consumed a total of 40 g of fat, including the snack. What percent of Shaun's total fat consumption does the snack represent? What is this percent as a decimal and as a fraction?

15. Use hundred grids to help place the following numbers in ascending order. 145%, $\frac{5}{8}\%$, 1.32, 0.65, 33.5%, 0.6%

16. A miner found 12 g of gold in a 2700-g sample of ore. What percent of the sample is gold, to the nearest tenth of a percent? What is the percent as a repeating decimal and as a fraction in lowest terms?

Literacy Link

A repeating decimal contains a digit or group of digits that repeat forever. You can write a repeating decimal using bar notation. $0.33333\dots = 0.\overline{3}$ $0.454545\dots = 0.\overline{45}$

17. A fundraising coordinator is preparing an advertising flyer for an upcoming event. She wants to use either a fraction or a decimal number to represent each of the percents in the following statements. Decide whether a fraction or a decimal number is better and rewrite each statement using your chosen representation. Justify your choices.

- a) Ticket sales are 130% of what they were at this time last year.
 b) We are already at $60\frac{1}{2}\%$ of our target and we just started!
 c) We have managed to cut our costs by 0.75%.

18. A fisheries worker recorded the following species and numbers of fish passing by a fish counter. Copy and complete the following table.

| Species | Number | Percent of Total | Fraction of Total | Decimal Equivalent |
|-----------|--------|------------------|-------------------|--------------------|
| Chinook | 143 | | | |
| Coho | 122 | | | |
| Steelhead | 2 | | | |

19. Over five years, the circulation of a magazine increased from 25 000 copies to 150 000 copies. What percent is the new circulation of the circulation five years ago? What is this percent as a decimal and as a fraction?

20. Kim's resting heart rate was 75 beats per minute. A trainer advised Kim to have a portion of her workout at 90 beats per minute and a portion at 125 beats per minute, but not to exceed 150 beats per minute. Express each heart rate compared to the resting heart rate as a percent, a fraction, and a decimal.



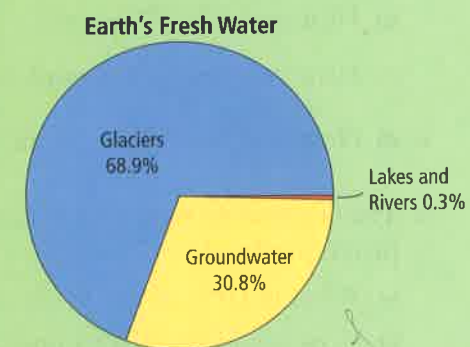
Extend

21. Copy and complete the first three rows of the table. Use the patterns in the first three rows to complete the last two rows.

| Percent | Decimal | Fraction |
|---------|---------|---------------|
| a) 1000 | | |
| b) | 5.00 | |
| c) | | $\frac{5}{2}$ |
| d) | | |
| e) | | |

MATH LINK

Represent the percents shown in the circle graph in two other ways.



Did You Know?

In 2002, NASA launched two satellites to measure groundwater amounts from space! These satellites use gravity to weigh Earth's groundwater.