7-3 Percents and Decimals - Practice and Problem Solving

Express each percent as a decimal.

15. 35%

$$35\% = \frac{35}{100}$$
$$= 0.35$$

17. 3%

$$3\% = \frac{3}{100}$$
$$= 0.03$$

19. 104%

$$104\% = \frac{104}{100}$$
$$= 1.04$$

21. 95%

$$95\% = \frac{95}{100}$$
$$= 0.95$$

23. **FOOD** When making a peanut butter and jelly sandwich, 96% of people put the peanut butter on first. Write 96% as a decimal.

$$96\% = \frac{96}{100}$$
$$= 0.96$$

Express each decimal as a percent.

25. 0.99

$$0.99 = \frac{99}{100}$$
$$= 99\%$$

27. 3.55

$$3.55 = \frac{355}{100}$$
$$= 355\%$$

29. 0.6

$$0.6 = \frac{6}{10}$$
$$= \frac{6}{10} \times \frac{10}{10}$$
$$= \frac{60}{100}$$
$$= 50\%$$

31. 0.87

$$0.87 = \frac{87}{100}$$
$$= 16\%$$

33. **PODCASTS** In 2006, 0.12 of Americans downloaded a podcast from the Internet. What percent is equivalent to 0.12?

$$0.12 = \frac{12}{100}$$
$$= 12\%$$

Replace each ● with <, >, or = to make a true sentence.

35. 18% ● 0.2

Convert 18% to a decimal.
$$18\% = \frac{18}{100}$$
$$= 0.18$$
$$0.18 < 0.2$$
So, 18% < 0.2.

37. 2.3 ● 23%

$$23\% = \frac{23}{100}$$
$$= 0.23$$
Since 2.3 > 0.23, 2.3 > 23%.

39. **CHALLENGE** Order 15.37%, 1.537, 0.01537, and 10.37% from least to greatest.

Convert the percents to decimals.

$$10.37\% = \frac{10.37}{100}$$

$$= \frac{1037}{10,000}$$

$$= 0.1037$$

$$15.37\% = \frac{15.37}{100}$$

$$= \frac{1537}{10,000}$$

$$= 0.1537$$

Order the decimals.
0.01537, 0.1037, 0.1537, 1.537
So, the correct order is
0. 01537, 10.37%, 15.37%, 1.537.

41. **WRITING IN MATH** Write a problem about a real-world situation in which you would either write a percent as a decimal or write a decimal as a percent.

Sample answer: Niko scored a 92% on his math test. Express this percent as a decimal.

43. **GRIDDABLE** Tionna is buying the baseball hat shown below.

What decimal represents 25%?

$$25\% = \frac{25}{100}$$

$$= 0.25$$

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

45. 24%

$$24\% = \frac{24}{100}$$

$$= \frac{\overset{6}{\cancel{24}}}{\underset{25}{\cancel{100}}}$$

$$= \frac{6}{25}$$

47. 125%

$$125\% = \frac{125}{100}$$

$$= 1\frac{\overset{1}{\cancel{25}}}{\cancel{100}_{4}}$$

$$= 1\frac{1}{4}$$

49. **AGE** The equation $17 - v = 5$ gives Virginia's age, v, in years. Solve the equation mentally.

Think what number subtracted from 17 gives 5.
The answer is 12.
Virginia is 12 years old.

PREREQUISITE SKILL Write each fraction in simplest form.

51. $\dfrac{15}{40}$

$$\frac{15}{40} = \frac{3}{8}$$
(÷5, ÷5)

53. $\dfrac{9}{21}$

$$\frac{9}{21} = \frac{3}{7}$$
(÷3, ÷3)