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## Chapter 7 - Percent and Probability - Mid-Chapter Quiz: Lessons 7-1 through 7-4

**Write each percent as a fraction in simplest form.**

1. 39%

$$39\% = \frac{39}{100}$$

$$\frac{39}{100}$$

2. 18%

$$18\% = \frac{18}{100}$$
$$= \frac{9}{50}$$

$$\frac{9}{50}$$

3. 175%

$$175\% = \frac{175}{100}$$
$$= \frac{7}{4}$$
$$= 1\frac{3}{4}$$

$$1\frac{3}{4}$$

4. **MULTIPLE CHOICE** On Tuesday, 48% of the students at West Middle School rode the bus to school. What fractional part of the school did *not* ride the bus to school?

**A** $\frac{13}{25}$

**B** $\frac{1}{48}$

**C** $\frac{5}{4}$

**D** $\frac{12}{15}$

$100\% - 48\% = 52\%$

$$52\% = \frac{52}{100}$$

$$= \frac{13}{25}$$

The correct answer is A.

A

**Write each fraction or mixed number as a percent.**

5. $\frac{8}{20}$

$$\frac{8}{20} = \frac{8 \times 5}{20 \times 5}$$

$$= \frac{40}{100}$$

$$= 40\%$$

40%

6. $1\frac{1}{2}$

$$1\frac{1}{2} = \frac{3}{2}$$

$$= \frac{3 \times 50}{2 \times 50}$$

$$= \frac{150}{100}$$

$$= 150\%$$

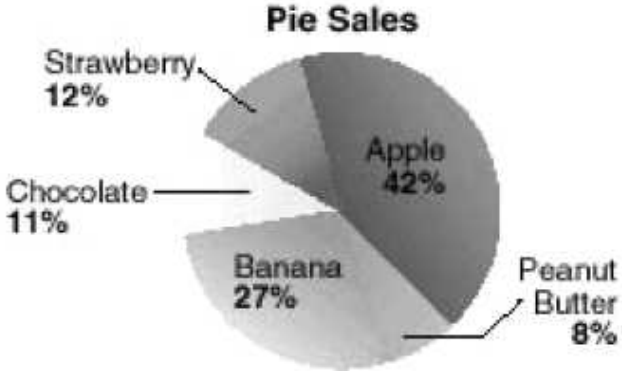
150%

7. $\frac{3}{100}$

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

3%

**FOOD** Use the graph below.




8. What part of the total sales is either strawberry or peanut butter?

   20%

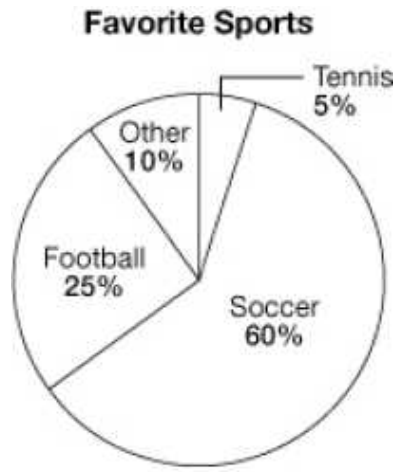
   20%

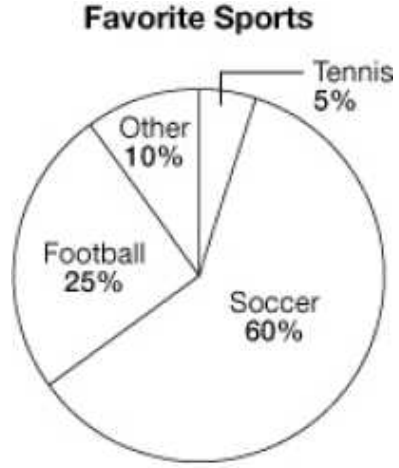
9. Which two types of pie have about the same amount of sales?

   Strawberry and chocolate since they have about the same percents.

   strawberry and chocolate

10. **SPORTS** In Ms.Thorne's class, 60% of the students like soccer, 25% favor football, 5% prefer tennis, and 10% choose another type of sport. Sketch a circle graph to display the data.



**Write each percent as a decimal.**

**11.** 73%

$$73\% = \frac{73}{100}$$
$$= 0.73$$

0.73

**12.** 145%

$$145\% = \frac{145}{100}$$
$$= 1\frac{45}{100}$$
$$= 1.45$$

1.45

**13.** 9%

$$9\% = \frac{9}{100}$$
$$= 0.09$$

0.09

**14.** **PLAYS** Twyla has memorized 85% of her lines for the school play. What decimal is equivalent to 85%?

$$85\% = \frac{85}{100}$$
$$= 0.85$$

0.85

**Write each decimal as a percent.**

**15.** 0.22

$$0.22 = \frac{22}{100}$$
$$= 22\%$$

22%

**16.** 6.75

$$6.75 = \frac{675}{100}$$
$$= 675\%$$

675%

**17.** 0.1

$$0.1 = \frac{1}{10}$$
$$= \frac{1 \times 10}{10 \times 10}$$
$$= \frac{10}{100}$$
$$= 10\%$$

10%

18. **MUSIC** The number of chorus students increased by 1.2 from the previous year. Write 1.2 as a percent.

$$1.2 = \frac{12}{10}$$
$$= \frac{12 \times 0}{10 \times 10}$$
$$= \frac{120}{100}$$
$$= 120\%$$

120%

19. **MULTIPLE CHOICE** Each circle is divided into sections of equal size. Which circle has 25% of its total area shaded?

**F**

**G**

**H**

**F**

The circle is divided into 8 equal parts.

$25\% = \frac{25}{100} = \frac{1}{4}$ or $\frac{2}{8}$, so look for a circle with 2 parts shaded.

The correct answer is F.

F

**The table shows the types of shirts on a store shelf. Find the probability of choosing each type of shirt.**

| Type of Shirt | Number on Shelf |
|---|---|
| polo | 7 |
| T-shirt | 6 |
| sweater | 4 |
| tank top | 3 |

**20.** $P(\text{polo})$

$$P(\text{polo}) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

$$= \frac{7}{20}$$

$$P(\text{polo}) = \frac{7}{20}$$

$$\frac{7}{20}$$

**21.** $P(\text{T-shirt or tank top})$

$$P(\text{T-shirt or tank top}) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

$$= \frac{9}{20}$$

$$P(\text{T-shirt or tank top}) = \frac{9}{20}$$

$$\frac{9}{20}$$

**22.** $P(\textit{not}\ \text{sweater})$

$$P(\textit{not sweater}) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

$$= \frac{16}{20}$$

$$= \frac{4}{5}$$

$$P(\textit{not sweater}) = \frac{4}{5}$$

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

**23.** $P(\textit{not}$ polo or tank top$)$

$$P(\textit{not polo or tank top}) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

$$= \frac{10}{20}$$

$$= \frac{1}{2}$$

$$P(\textit{not polo or tank top}) = \frac{1}{2}$$

$$\frac{1}{2}$$

**24.** **SCHOOL** There is a 60% chance that Suzette will be the next group leader in her reading class. What is the probability that she will *not* be the next group leader? Write the answer as a fraction, decimal, and percent.

$$100\% - 60\% = 40\%$$

$$40\% = \frac{40}{100}$$

$$= \frac{2}{5}$$

$\frac{2}{5}$, 0.4, or 40%