Lesson 6.2   Fractions, Decimals, and Percents

Express each fraction as a percent.

1. $\dfrac{4}{5}$ _____

2. $\dfrac{5}{8}$ _____

3. $\dfrac{8}{15}$ _____

4. $1\dfrac{3}{4}$ _____

5. $3\dfrac{7}{10}$ _____

6. $2\dfrac{9}{20}$ _____

Express each decimal as a percent.

7. 0.08 _____

8. 0.56 _____

9. 0.9 _____

10. 1.07 _____

11. 2.75 _____

12. 3.5 _____

Express each percent as a fraction in simplest form.

13. 8.25% _____

14. 30.5% _____

15. $33\dfrac{1}{3}$% _____

16. $41\dfrac{2}{3}$% _____

17. $56\dfrac{1}{4}$% _____

18. $87\dfrac{1}{2}$% _____

Express each fraction as a percent. Round your answer to the nearest whole number.

19. $\dfrac{108}{250}$ _____

20. $\dfrac{72}{125}$ _____

21. $\dfrac{132}{216}$ _____

22. $\dfrac{178}{450}$ _____

Solve. Show your work.

23. 2.85 kilograms of sugar is mixed with 3.15 kilograms of flour.
What percent of this mixture is sugar?

24. A group of students were surveyed and asked to name their favorite fruit.
The table shows the results of the survey.

Favorite Fruits

Fruit	Number of Students
Apples	30
Oranges	15
Strawberries	40
Pears	25
Peaches	10

a) What percent of students surveyed prefer strawberries?

b) What percent of students surveyed prefer the least favorite fruit?

c) What percent of students surveyed prefer apples or pears?

Brain @ Work

1. $14.4 \times 1{,}000 = 14{,}400$ mL

   1 minute $\rightarrow 140 + 100 = 240$ mL

   $\dfrac{14{,}400}{240} = 60$ min $= 1$ h

   It will take 1 hour to fill the fish tank completely.

2. $4.8 \times 1{,}000 = 4{,}800$ mL

   Water leaking out of the tank in 1 minute $\rightarrow$
   $270 - 150 = 120$ mL

   $4{,}800 \div 120 = 40$ min

   It will take 40 minutes to empty the tank.

Chapter 6

Lesson 6.1

1. $\dfrac{6}{25}$
2. $\dfrac{24}{25}$
3. $1\dfrac{7}{25}$
4. $1\dfrac{1}{2}$
5. $2\dfrac{1}{4}$
6. $3\dfrac{3}{5}$
7. $6\dfrac{49}{50}$
8. $7\dfrac{3}{4}$
9. 0.08
10. 0.32
11. 0.85
12. 0.99
13. 1.3
14. 5.68
15. 2.85
16. 3.8

17. $\dfrac{45}{300} \times 100\% = 15\%$

    15% of the animals in the zoo are birds.

18. $\dfrac{98}{400} \times 100\% = 24\dfrac{1}{2}$

    $24\dfrac{1}{2}\%$ of the vehicles that passed the intersection are buses.

19. Boys $\rightarrow 400 - 180 = 220$

    $\dfrac{220}{400} = 55\%$

    55% of the students at the basketball game are boys.

20. Correct $\rightarrow 30 - 12 = 18$

    $\dfrac{18}{30} \times 100\% = 60\%$

    He answered 60% of the questions correctly.

21. Total $= 12 + 20 + 8 = 40$

    $\dfrac{12}{40} \times 100\% = 30\%$

    30% of the muffins are blueberry.

22. Total $= 23 + 40 + 28 + 52 + 77$

    $= 220$

    $\dfrac{77}{220} \times 100\% = 35\%$

    35% of the books were sold on Friday.

Lesson 6.2

1. 80%
2. $62\dfrac{1}{2}\%$
3. $53\dfrac{1}{3}\%$
4. 175%
5. 370%
6. 245%
7. 8%
8. 56%
9. 90%
10. 107%
11. 275%
12. 350%
13. $\dfrac{33}{400}$
14. $\dfrac{61}{200}$
15. $\dfrac{1}{3}$
16. $\dfrac{5}{12}$
17. $\dfrac{9}{16}$
18. $\dfrac{7}{8}$
19. 43%
20. 58%
21. 61%
22. 40%

23. Total amount $= 2.85$ kg $+ 3.15$ kg
    $= 6$ kg

    $\dfrac{2.85}{6} \times 100\% = 47\dfrac{1}{2}\%$

    $47\dfrac{1}{2}\%$ of the mixture is sugar.

24. a) Total $= 30 + 15 + 40 + 25 + 10$
    $= 120$

    $\dfrac{40}{120} \times 100\% = 33\dfrac{1}{3}\%$

    $33\dfrac{1}{3}\%$ of students surveyed prefer strawberries.

    b) $\dfrac{10}{120} \times 100\% = 8\dfrac{1}{3}\%$

    $8\dfrac{1}{3}\%$ of students surveyed prefer the least favorite fruit (peaches).

    c) $30 + 25 = 55$

    $\dfrac{55}{120} \times 100\% = 45\dfrac{5}{6}\%$

    $45\dfrac{5}{6}\%$ of students surveyed prefer apples or pears.

Lesson 6.3

1. $100\% \rightarrow 36$ ft

   $1\% \rightarrow \dfrac{36}{100}$

   $45\% \rightarrow \dfrac{36}{100} \times 45 = 16.2$ feet

2. $43\dfrac{3}{4}\%$ miles
3. $156\dfrac{2}{5}$ gallons
4. 117 pounds
5. 54 hours
6. 550
7. 375
8. 260
9. 300
10. $100\% - 64\% = 36\%$

    $36\% \times 325 = 117$

    117 children at the zoo are girls.