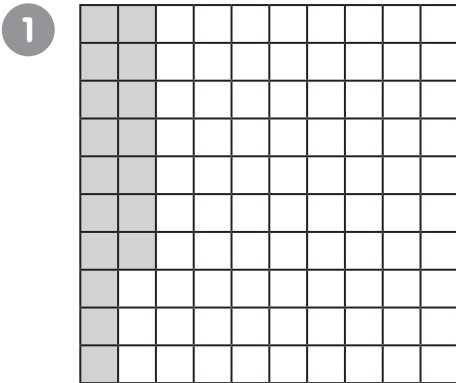


Reteach Percent

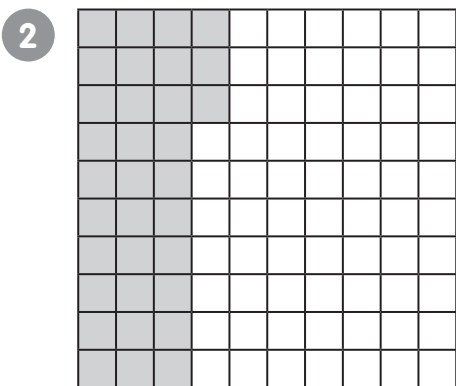
Activity 1 Percent

Fill in each blank.



_____ of 100 equal parts are shaded.

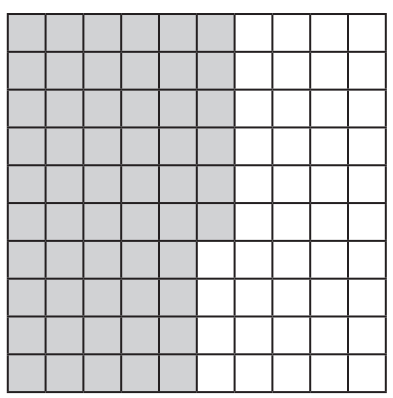
/ 100 of the large square is shaded.



_____ of 100 equal parts are shaded.

/ 100 of the large square is shaded.

3

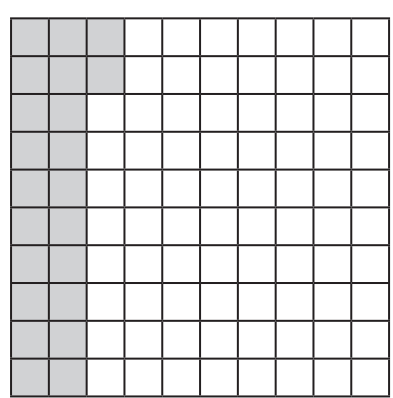


_____ of 100 equal parts are shaded.

$\frac{\square}{100}$ of the large square is shaded.

Fill in each blank.

Example



_____ **22** _____ parts of 100 equal parts are shaded.

$\frac{\text{22}}{100}$ of the large square is shaded.

_____ **22** _____ % of the large square is shaded.

$\frac{\text{78}}{100}$ of the large square is **not** shaded.

_____ **78** _____ % of the large square is **not** shaded.

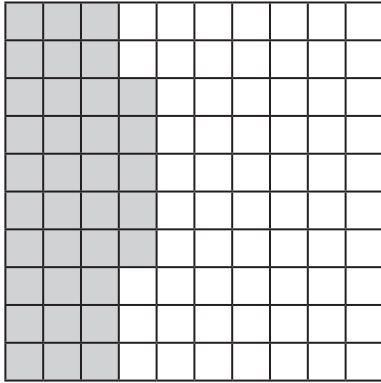
Count the number of parts that are shaded.



Count the number of parts that are not shaded.



4



_____ parts of 100 equal parts are shaded.

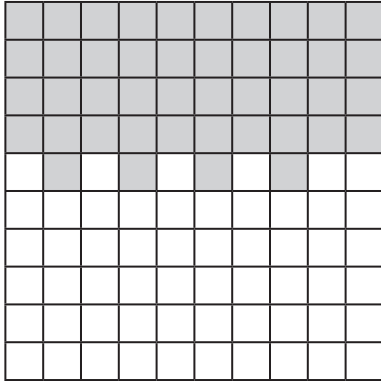
$\frac{\quad}{100}$ of the large square is shaded.

_____ % of the large square is shaded.

$\frac{\quad}{100}$ of the large square is **not** shaded.

_____ % of the large square is **not** shaded.

5



_____ parts of 100 equal parts are shaded.

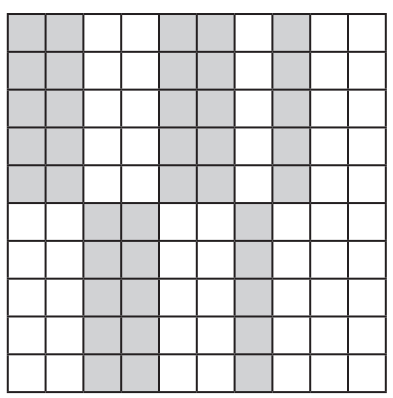
$\frac{\quad}{100}$ of the large square is shaded.

_____ % of the large square is shaded.

$\frac{\quad}{100}$ of the large square is **not** shaded.

_____ % of the large square is **not** shaded.

6



_____ parts of 100 equal parts are shaded.

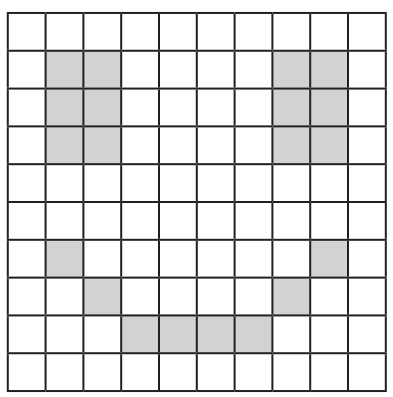
$\frac{\square}{100}$ of the large square is shaded.

_____ % of the large square is shaded.

$\frac{\square}{100}$ of the large square is **not** shaded.

_____ % of the large square is **not** shaded.

7



_____ parts of 100 equal parts are shaded.

$\frac{\square}{100}$ of the large square is shaded.

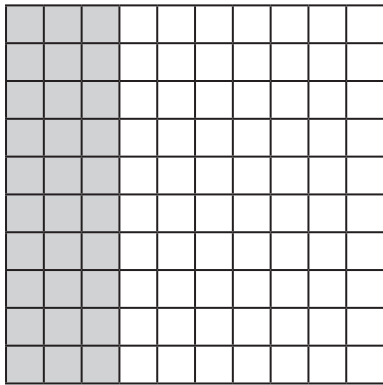
_____ % of the large square is shaded.

$\frac{\square}{100}$ of the large square is **not** shaded.

_____ % of the large square is **not** shaded.

In each figure, write the shaded parts as a percent of the whole figure.

Example

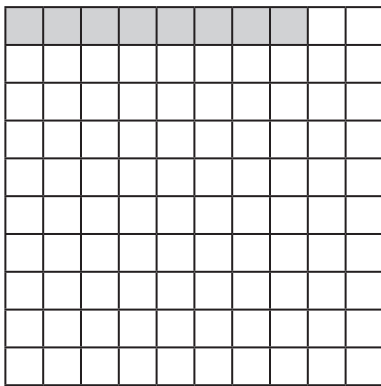


30 %

Count the number of parts that are shaded. Write the number as a percent.

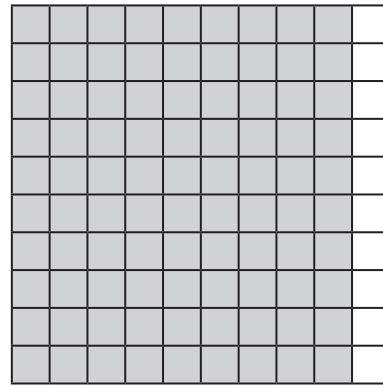


8



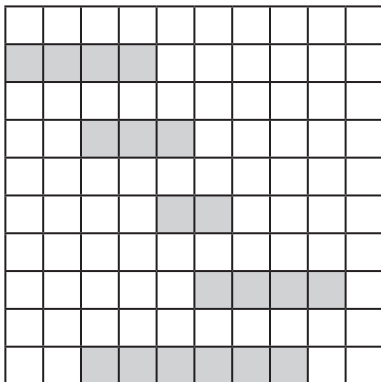
_____ %

9



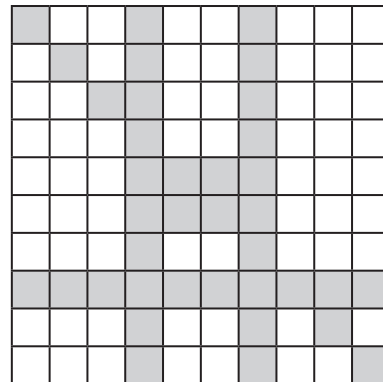
_____ %

10



_____ %

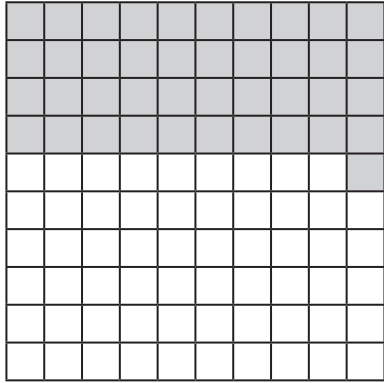
11



_____ %

Fill in each blank.

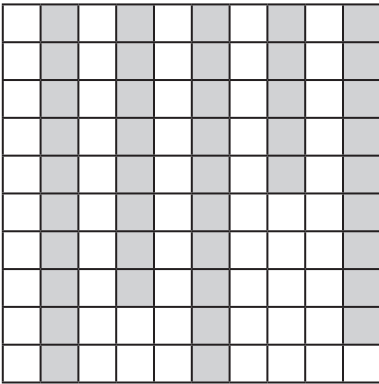
Example



41 % of the whole figure is shaded.

59 % of the whole figure is **not** shaded.

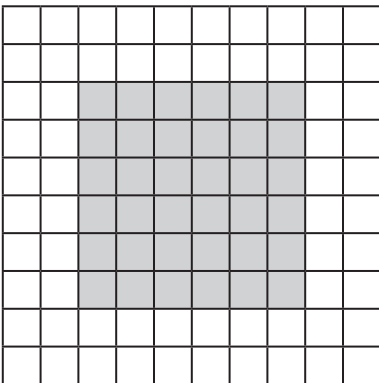
12



_____ % of the whole figure is shaded.

_____ % of the whole figure is **not** shaded.

13



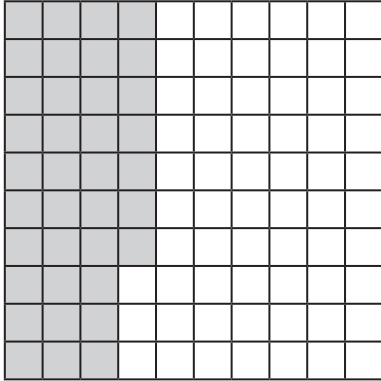
_____ % of the whole figure is shaded.

_____ % of the whole figure is **not** shaded.

Answer each question.

Example

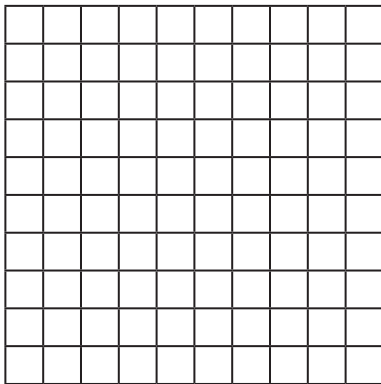
Shade 37% of the whole figure.



37% = 37 out of 100 parts
Count 37 parts and shade them.



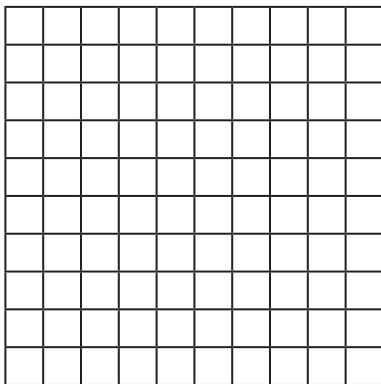
14 Shade 19% of the whole figure.



19% = _____ out of 100 parts
Count _____ parts and shade them.



15 Shade 64% of the whole figure.



Express as a percent.

Example

$$19 \text{ out of } 100 = \underline{19} \%$$

16 23 out of 100 = _____ %

17 9 out of 100 = _____ %

18 87 out of 100 = _____ %

19 12 out of 100 = _____ %

Express as a percent.

Example

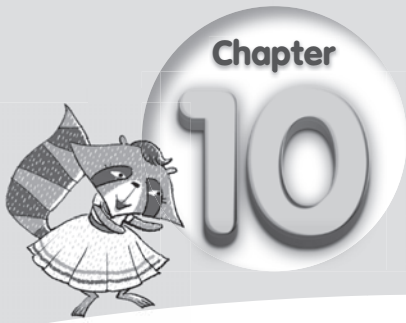
$$\underline{16} \text{ out of } 100 = 16\%$$

20 _____ out of 100 = 44%

21 _____ out of 100 = 38%

22 _____ out of 100 = 99%

23 _____ out of 100 = 6%



Chapter

10

Reteach Percent

Activity 2 Fractions, Decimals, and Percent

Express as a fraction with a denominator of 100.

1 8 out of 100 _____

2 46 out of 100 _____

Express as a decimal.

3 $\frac{17}{100} =$ _____

4 $\frac{69}{100} =$ _____

Express as a fraction.

5 $0.25 = \frac{\square}{100}$

6 $0.61 = \frac{\square}{100}$

Express each fraction in simplest form.

7 $\frac{16}{20} = \frac{\square}{\square}$

8 $\frac{48}{100} = \frac{\square}{\square}$

Express each percent as a fraction in simplest form.

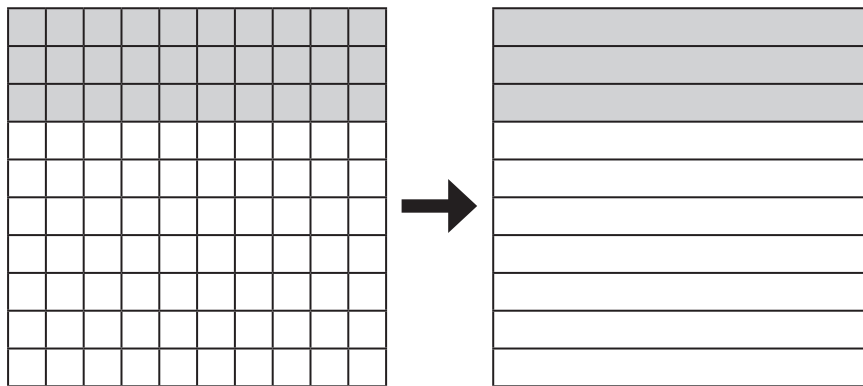
Example

$$30\% = \frac{3}{10}$$

Method 1

$$30\% = \frac{30}{100}$$

$$= \frac{3}{10}$$

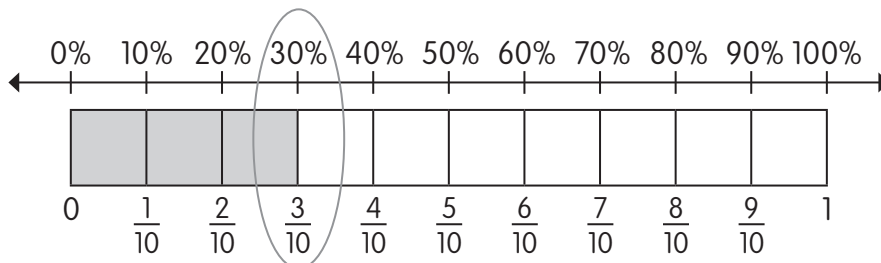


Write the percent as a fraction with 100 as its denominator. Express the fraction in simplest form.



Method 2

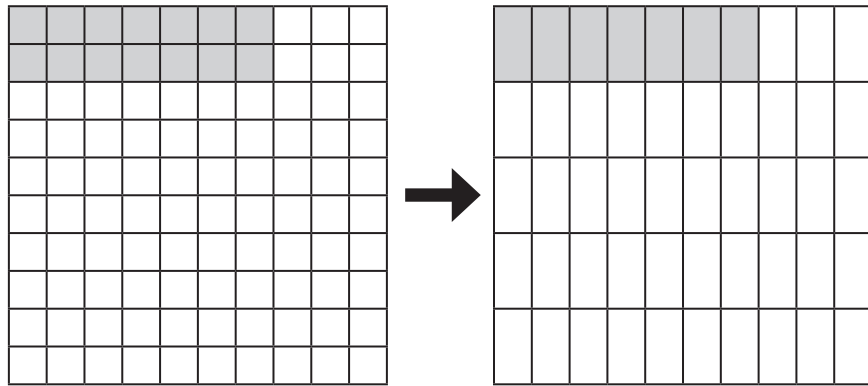
$$30\% = \frac{3}{10}$$



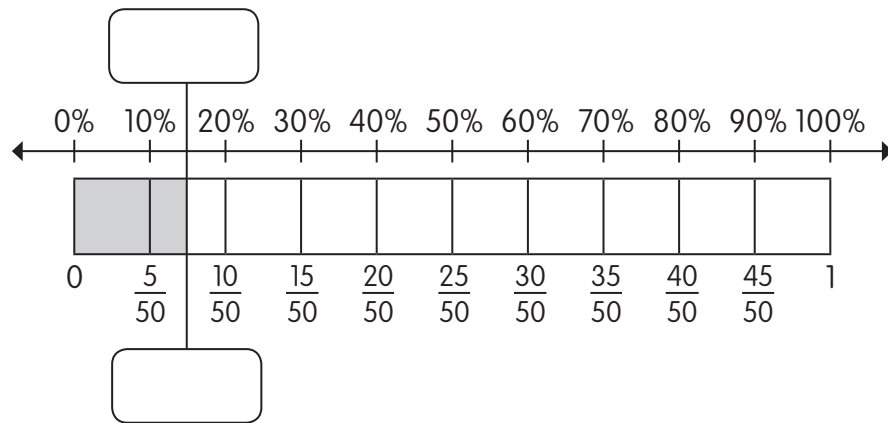
9 $14\% = \frac{\square}{100}$

$= \frac{\square}{\square}$

Method 1



Method 2



10 $22\% = \frac{\square}{100}$

$= \frac{\square}{\square}$

11 $46\% = \frac{\square}{100}$

$= \frac{\square}{\square}$

12 $55\% = \frac{\square}{100}$

$= \underline{\hspace{2cm}}$

13 $72\% = \frac{\square}{100}$

$= \underline{\hspace{2cm}}$

14 25% =

15 68% =

Express each percent as a decimal.

Example

$$65\% = \underline{0.65}$$

Method 1

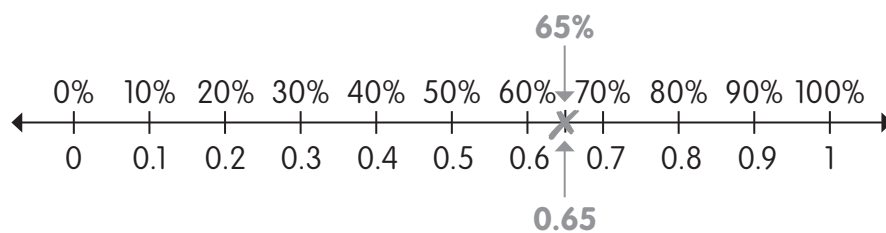
$$65\% = \frac{\boxed{65}}{\boxed{100}}$$
$$= \underline{0.65}$$

Write the percent as a fraction with 100 as its denominator.



Method 2

$$65\% = \underline{0.65}$$



$$16 \quad 13\% = \frac{\square}{100}$$
$$= \underline{\hspace{2cm}}$$

$$17 \quad 28\% = \frac{\square}{100}$$
$$= \underline{\hspace{2cm}}$$

$$18 \quad 34\% =$$

$$19 \quad 7\% =$$

$$20 \quad 41\% =$$

$$21 \quad 66\% =$$

Express each decimal as a percent.

Example

$$0.2 = \underline{20} \%$$

Method 1

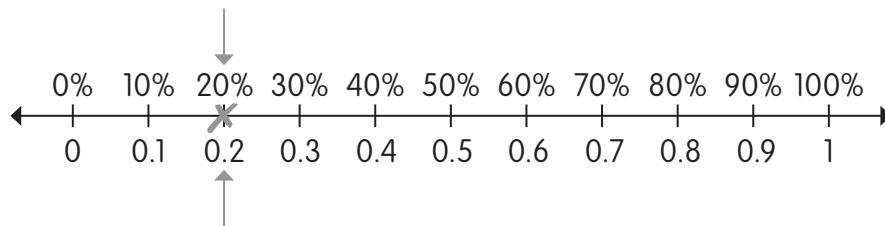
$$0.2 = \frac{\boxed{2}}{\boxed{10}}$$
$$= \frac{\boxed{20}}{\boxed{100}}$$

$$= \underline{20} \%$$

Make the denominator to 100.



Method 2



$$0.2 = \underline{20} \%$$

Method 3

$$0.2 = 0.2 \times 100 \%$$

$$= \underline{20} \%$$

Multiply by 100%



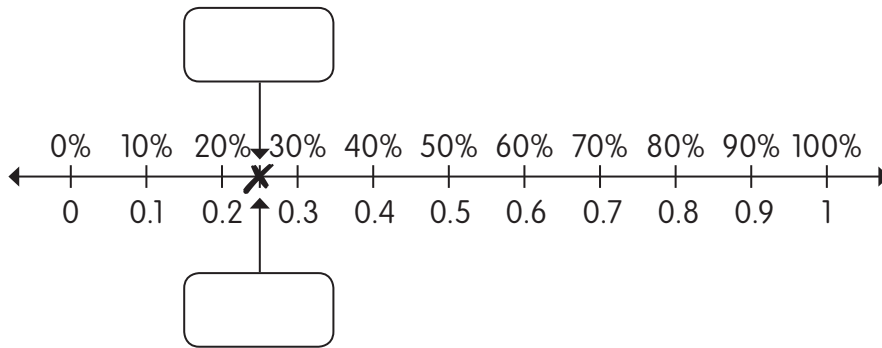
22 $0.26 = \underline{\hspace{2cm}} \%$

Method 1

$$0.26 = \frac{\boxed{}}{\boxed{}}$$

$$= \underline{\hspace{2cm}} \%$$

Method 2



$$0.26 = \underline{\hspace{2cm}} \%$$

Method 3

$$0.26 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \%$$

23 $0.03 = \underline{\hspace{2cm}} \%$

Method 1

$$0.03 = \frac{\boxed{}}{\boxed{}}$$

$= \underline{\hspace{2cm}} \%$

Method 2



$0.03 = \underline{\hspace{2cm}} \%$

Method 3

$0.03 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}} \%$

24 $0.52 =$

25 $0.89 =$

26 $0.05 =$

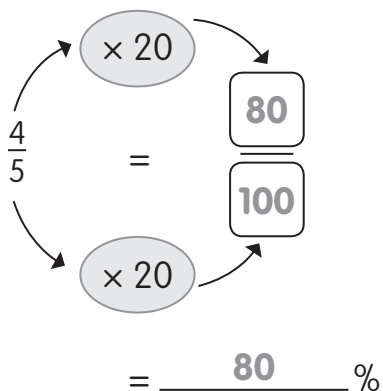
27 $0.92 =$

Express each fraction as a percent.

Example

$$\frac{4}{5} = \underline{80} \%$$

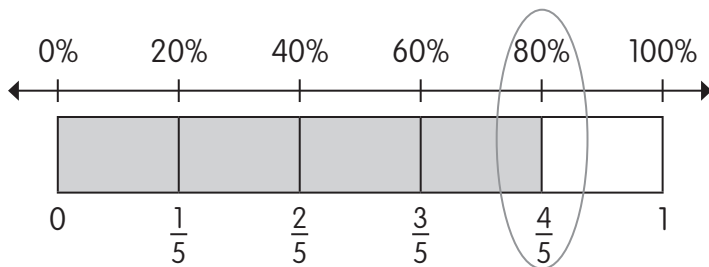
Method 1



Make the denominator to 100.
 $5 \times \underline{20} = 100$



Method 2



$$\frac{4}{5} = \underline{80} \%$$

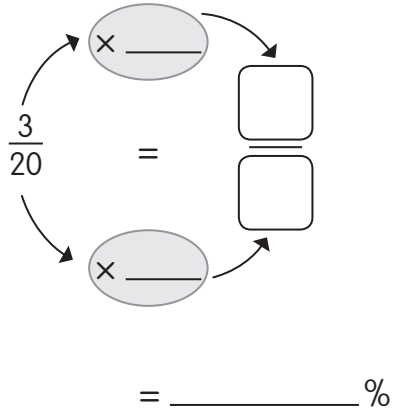
Method 3

$$\frac{4}{5} = \frac{4}{5} \times 100\%$$

$$= \underline{80} \%$$

28 $\frac{3}{20} = \underline{\hspace{2cm}}\%$

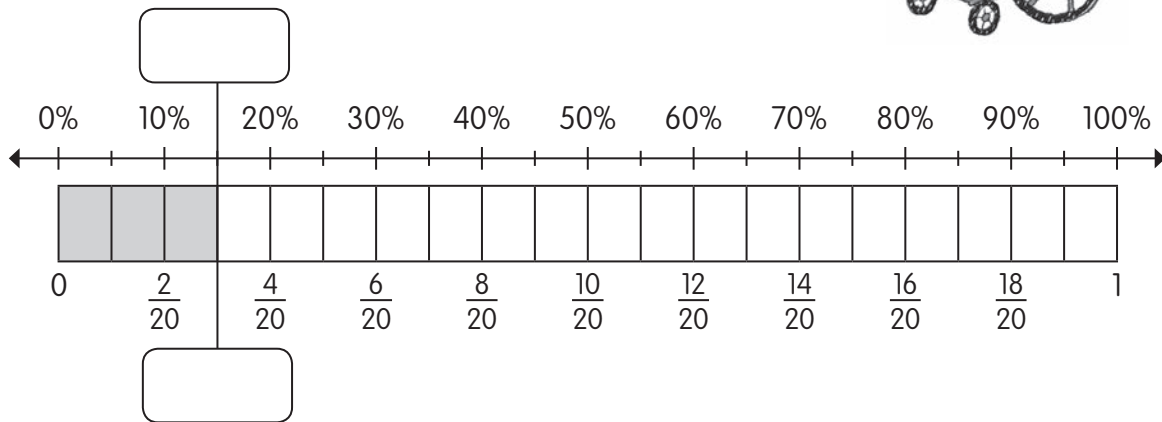
Method 1



Make the denominator to 100.
 $20 \times \underline{\hspace{1cm}} = 100$



Method 2



$\frac{3}{20} = \underline{\hspace{2cm}}\%$

Method 3

$\frac{3}{20} = \frac{3}{20} \times 100\%$

$= \underline{\hspace{2cm}}\%$

29 $\frac{1}{4} =$

30 $\frac{11}{20} =$

31 $\frac{3}{5} =$

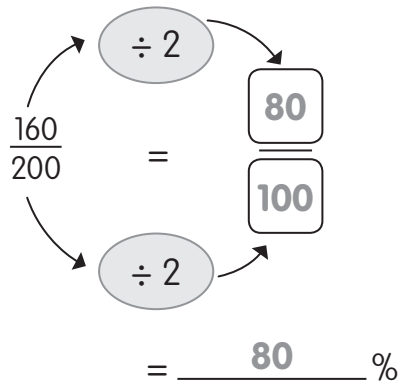
32 $\frac{19}{25} =$

Express each fraction as a percent.

Example

$\frac{160}{200} = 80\%$

Method 1



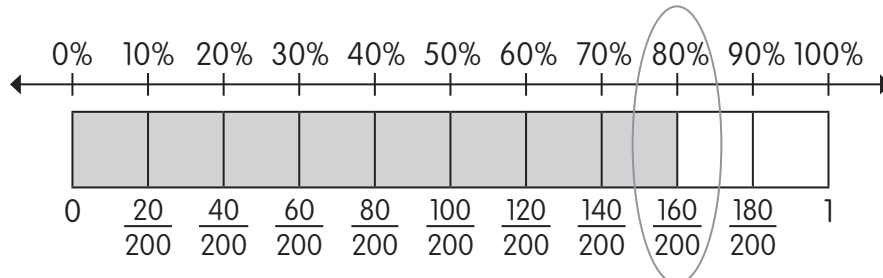
Make the denominator to 100.

$200 \div 2 = 100$



Method 2

$\frac{160}{200} = 80\%$



Method 3

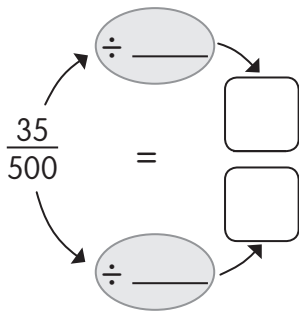
$$\frac{160}{200} = \frac{160}{200} \times 100\%$$

$$= \frac{16000}{200}$$

$$= \underline{\quad 80 \quad} \%$$

33 $\frac{35}{500} = \underline{\hspace{2cm}} \%$

Method 1



$$= \underline{\hspace{2cm}} \%$$

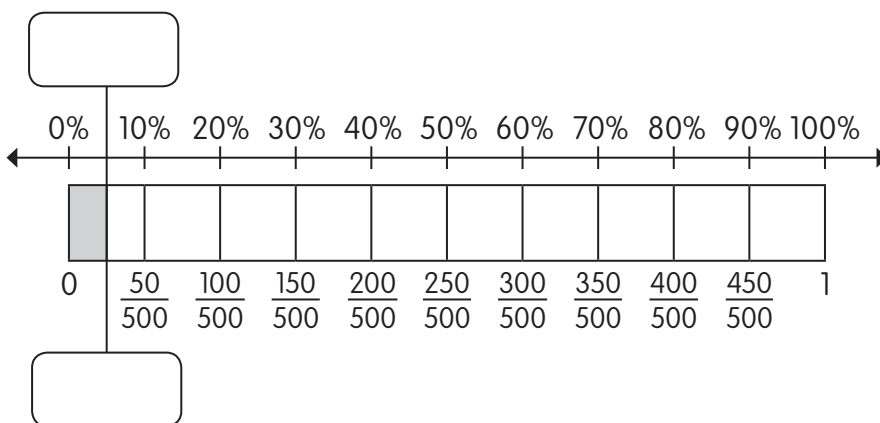
Make the denominator to 100.

$$500 \div \underline{\hspace{1cm}} = 100$$



Method 2

$$\frac{35}{500} = \underline{\hspace{2cm}} \%$$



Method 3

$$\frac{35}{500} = \frac{\boxed{}}{\boxed{}} \times 100\%$$

$$= \frac{\boxed{}}{\boxed{}}$$

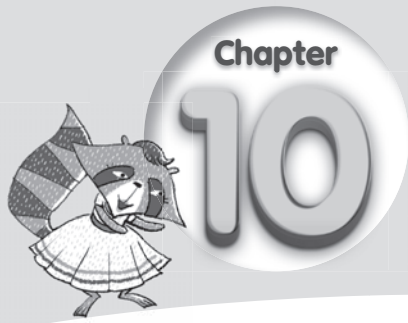
$$= \underline{\hspace{2cm}} \%$$

34 $\frac{318}{600} = \underline{\hspace{2cm}} \%$

35 $\frac{256}{400} = \underline{\hspace{2cm}} \%$

36 $\frac{111}{300} = \underline{\hspace{2cm}} \%$

37 $\frac{336}{700} = \underline{\hspace{2cm}} \%$



Reteach Percent

Activity 3 Percent of a Quantity

Solve.

1 $\frac{5}{6} \times 54 =$

2 $\frac{5}{11} \times 66 =$

3 $\frac{4}{9} \times 81 =$

4 $\frac{14}{25} \times 75 =$

5 $\frac{13}{15} \times 90 =$

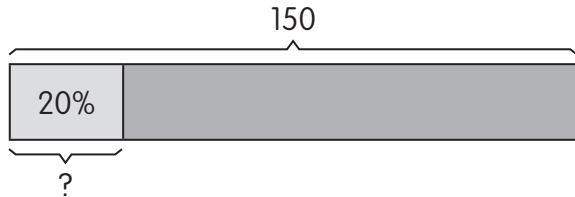
6 $\frac{7}{12} \times 96 =$

Solve.

Example

Find the value of 20% of 150.

Method 1



$$100\% \rightarrow \underline{150}$$

$$1\% \rightarrow \underline{150} \div \underline{100}$$
$$= \underline{1.5}$$

$$20\% \rightarrow \underline{20} \times \underline{1.5}$$
$$= \underline{30}$$

100% is the total quantity.

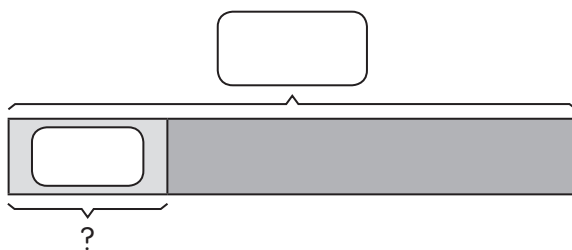


Method 2

$$20\% \text{ of } 150 = \underline{20\%} \times \underline{150}$$
$$= \frac{\boxed{20}}{\boxed{100}} \times \underline{150}$$
$$= \underline{30}$$

- 7 Find the value of 28% of 400.

Method 1



$$100\% \rightarrow \underline{\hspace{2cm}}$$

$$1\% \rightarrow \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$28\% \rightarrow \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Method 2

$$28\% \text{ of } 400 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \frac{\boxed{\hspace{1cm}}}{\boxed{\hspace{1cm}}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

8 Find the value of 46% of 700.

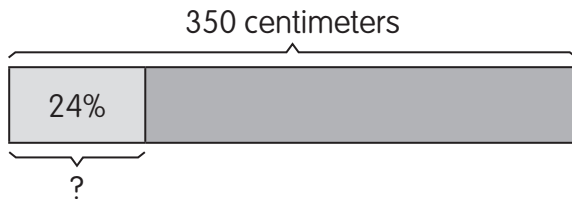
9 Find the value of 37% of 1,450.

Solve.

Example

Find the value of 24% of 350 centimeters.

Method 1



$$100\% \rightarrow \underline{350} \text{ centimeters}$$

$$1\% \rightarrow \underline{350} \div \underline{100}$$

$$= \underline{3.5} \text{ centimeters}$$

$$24\% \rightarrow \underline{24} \times \underline{3.5}$$

$$= \underline{84} \text{ centimeters}$$

Method 2

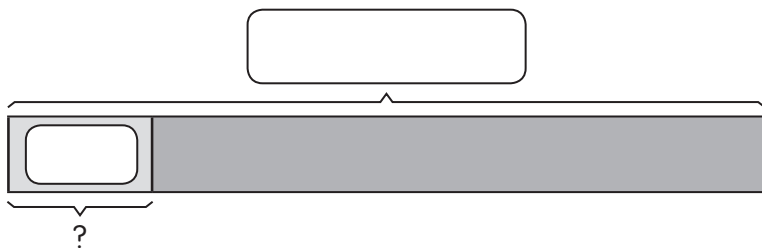
$$24\% \text{ of } 350 \text{ centimeters} = \underline{24\%} \times \underline{350}$$

$$= \frac{\boxed{24}}{\boxed{100}} \times \underline{350}$$

$$= \underline{84} \text{ centimeters}$$

10 Find the value of 19% of 600 kilograms.

Method 1



100% → _____ kilograms

1% → _____ ÷ _____

= _____ kilograms

19% → _____ × _____

= _____ kilograms

Method 2

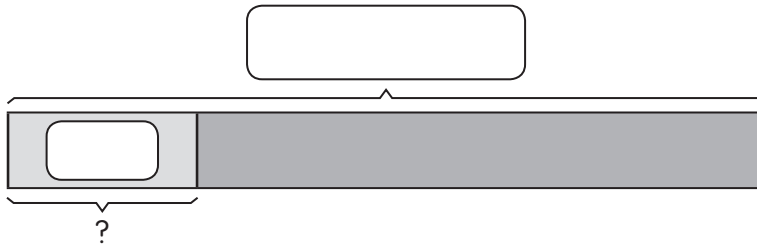
19% of 600 kilograms = _____ × _____

= $\frac{\boxed{}}{\boxed{}}$ × _____

= _____ kilograms

- 11 Find the value of 25% of 896 miles.

Method 1



100% → _____ miles

1% → _____ ÷ _____

= _____ miles

25% → _____ × _____

= _____ miles

Method 2

25% of 896 miles = _____ × _____

= $\frac{\boxed{}}{\boxed{}}$ × _____

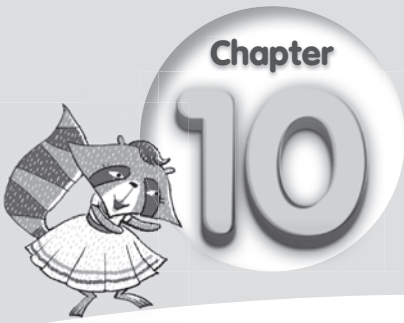
= _____ miles

12 Find the value of 3% of 1,900 pounds.

13 Find the value of 72% of 2,590 inches.

14 Find the value of 47% of 4,650 fluid ounces.

15 Find the value of 54% of 6,085 milliliters.



Reteach Percent

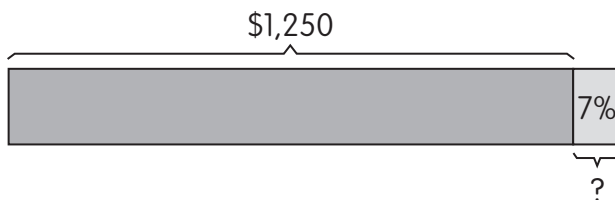
Activity 4 Real-World Problems: Percent

Solve. Draw a bar model to help you.

Example

A refrigerator cost \$1,250. There was a 7% sales tax on the refrigerator. How much was the sales tax?

Method 1



$$100\% \rightarrow \underline{\$1,250}$$

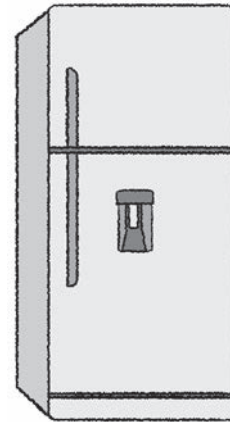
$$1\% \rightarrow \underline{\$1,250} \div \underline{100}$$

$$= \underline{\$12.50}$$

$$\underline{7}\% \rightarrow \underline{\$12.50} \times \underline{7}$$

$$= \underline{\$87.50}$$

The sales tax was \$87.50.



100% is the price of the refrigerator.

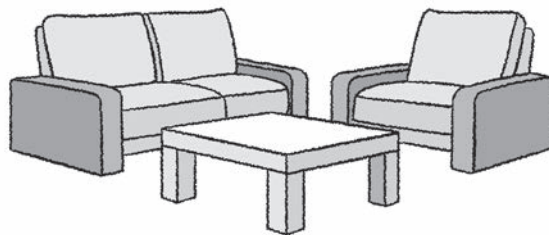


Method 2

$$\begin{aligned} \underline{\quad 7 \quad} \% \text{ of } \underline{\$1,250} &= \underline{\frac{7}{100}} \times \underline{\$1,250} \\ &= \underline{\$87.50} \end{aligned}$$

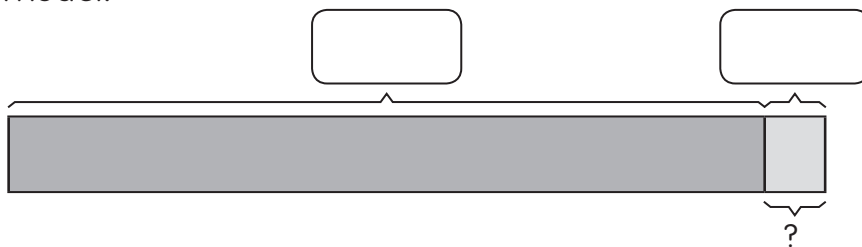
The sales tax was \$87.50.

- 1 A furniture set cost \$5,600 at Home Mart. There was an 8% sales tax on the furniture set. How much was the sales tax?



Method 1

Model:



$$100\% \rightarrow \underline{\hspace{2cm}}$$

$$1\% \rightarrow \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}}\% \rightarrow \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

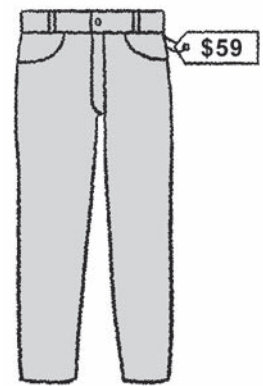
The sales tax was .

Method 2

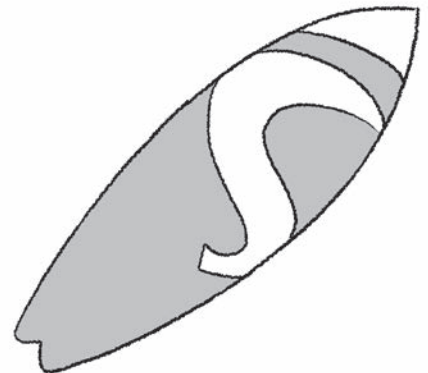
$$\underline{\hspace{2cm}} \% \text{ of } \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

The sales tax was _____.

- 2 Mr. Nelson bought a pair of pants that cost \$59. He paid a sales tax of 6% on the price of the pair of pants. How much sales tax did Mr. Nelson pay?



- 3 Callie bought a surfboard that cost \$269. She paid a sales tax of 7% on the price of the surfboard. What was the total cost of the surfboard including the sales tax?



Solve. Draw a bar model to help you.

Example

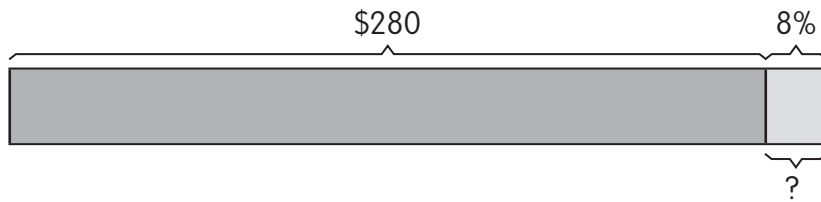
Mr. Edwards brought his family to a restaurant for lunch. The meal cost \$280. There was a 5% sales tax and a 3% meals tax on the price of the meal. How much was the combined tax?

$$\begin{aligned} \text{Combined tax} &= \underline{\quad 5 \quad} + \underline{\quad 3 \quad} \\ &= \underline{\quad 8\% \quad} \end{aligned}$$

A meals tax is applied in addition to a state's sales tax on the purchase of prepared food.



Method 1



$$100\% \rightarrow \underline{\quad \$280 \quad}$$

$$\begin{aligned} 1\% &\rightarrow \underline{\quad \$280 \quad} \div \underline{\quad 100 \quad} \\ &= \underline{\quad \$2.80 \quad} \end{aligned}$$

$$\begin{aligned} \underline{\quad 8 \quad}\% &\rightarrow \underline{\quad \$2.80 \quad} \times \underline{\quad 8 \quad} \\ &= \underline{\quad \$22.40 \quad} \end{aligned}$$

The combined tax was \$22.40.

Method 2

$$\begin{aligned} \underline{\quad 8 \quad}\% \text{ of } \underline{\quad \$280 \quad} &= \underline{\quad \frac{8}{100} \quad} \times \underline{\quad \$280 \quad} \\ &= \underline{\quad \$22.40 \quad} \end{aligned}$$

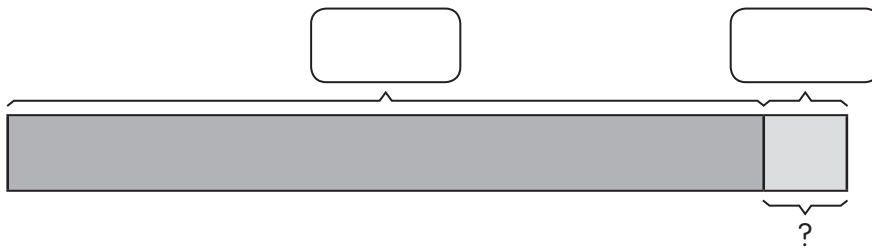
The combined tax was \$22.40.

- 4 Amirah had her dinner at a café that cost \$43. There was a 6% sales tax and a 5% meals tax on the price of her dinner. How much was the combined tax?

$$\text{Combined tax} = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Method 1



$$100\% \rightarrow \underline{\hspace{2cm}}$$

$$1\% \rightarrow \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}}\% \rightarrow \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

The combined tax was $\underline{\hspace{2cm}}$.

Method 2

$$\underline{\hspace{2cm}}\% \text{ of } \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

The combined tax was $\underline{\hspace{2cm}}$.

- 5 A family value meal for four cost \$310 in a restaurant. There was a 4% sales tax and a 2% meals tax on the price of the meal. What was the total cost of the family value meal including the taxes?

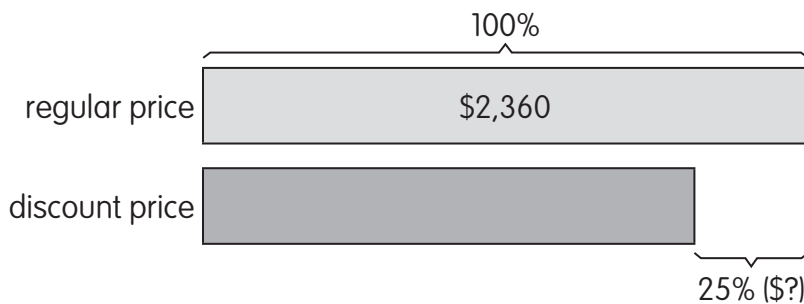
Solve. Draw a bar model to help you.

Example

The usual price of a television was \$2,360. During a sale, Mrs. Smith bought it at a 25% discount. How much was the discount?



Method 1



$$100\% \rightarrow \underline{\$2,360}$$

$$1\% \rightarrow \underline{\$2,360} \div \underline{100}$$

$$= \underline{\$23.60}$$

$$\underline{25} \% \rightarrow \underline{\$23.60} \times \underline{25}$$

$$= \underline{\$590}$$

The discount was \$590.

The discount is the difference between the regular price and the selling price. It is the amount you save.



Method 2

Discount = 25 % of regular price

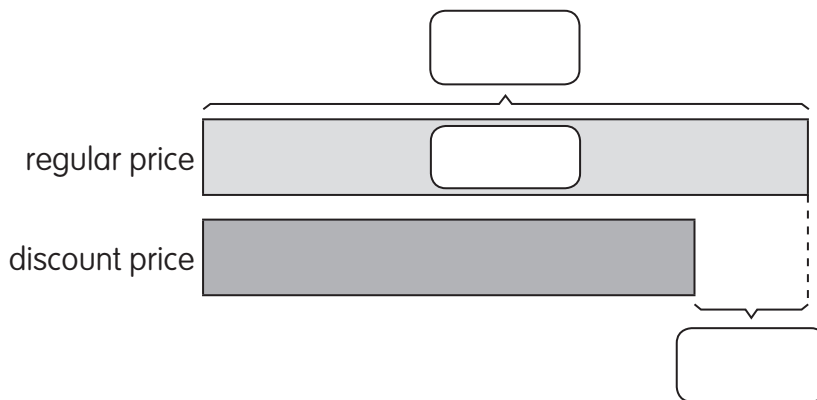
$$= \frac{25}{100} \times \underline{\$2,360}$$

$$= \underline{\$590}$$

The discount was \$590.

- 6 A shoe shop is having a 20% off storewide sale. The regular price of a pair of boots is \$128. How much is the discount?

Method 1



$$100\% \rightarrow \underline{\hspace{2cm}}$$

$$1\% \rightarrow \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}}\% \rightarrow \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

The discount is .

Method 2

Discount = _____ % of regular price

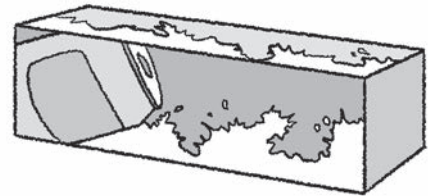
$$= \text{_____} \times \text{_____}$$

$$= \text{_____}$$

The discount is _____.

- 7 Ms. Carter went to a circus. The admission ticket cost \$76. There was a 10% discount. How much was the discount?

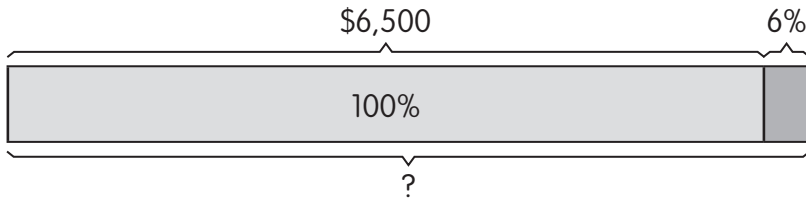
- 8 The original price of a case of soda was \$14. Farrah had a 5% discount code. How much did Farrah pay for the case of soda?



Solve. Draw a bar model to help you.

Example

Mr. King deposits \$6,500 in a bank that pays an interest of 6% per year. How much money will he have in his bank account at the end of 1 year?



$$\begin{aligned} \text{Interest} &= \underline{6} \% \text{ of } \underline{\$6,500} \\ &= \underline{\frac{6}{100}} \times \underline{\$6,500} \\ &= \underline{\$390} \end{aligned}$$

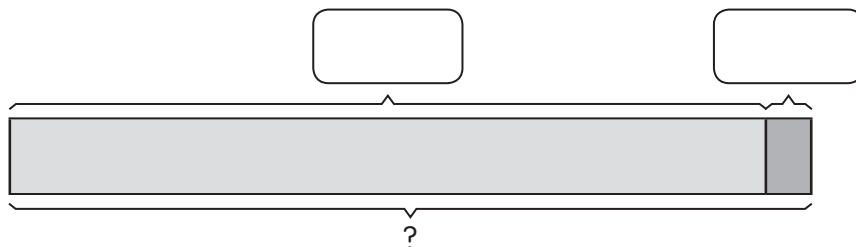
Interest is the amount that a bank pays you for depositing your money with them.



$$\begin{aligned} \text{Amount of money in the account at the end of 1 year} \\ &= \text{Money deposited} + \text{Interest} \\ &= \underline{\$6,500} + \underline{\$390} \\ &= \underline{\$6,890} \end{aligned}$$

Mr. King will have \$6,890 in his bank account at the end of 1 year.

- 9 Ms. Lopez invested \$7,000 in an investment fund with a bank. The bank paid 5% interest at the end of each year. How much money did Ms. Lopez have in her investment account at the end of 1 year?



$$\begin{aligned} \text{Interest} &= \underline{\hspace{2cm}} \% \text{ of } \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \end{aligned}$$

Interest is the amount that a bank pays you for investing your money with them.



Amount of money in the investment account at the end of 1 year

$$= \text{Money invested} + \text{Interest}$$

$$= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Ms. Lopez had $\underline{\hspace{2cm}}$ in her investment account at the end of 1 year.

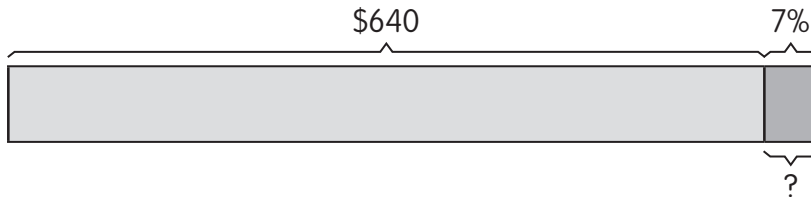
10 Ricardo deposits \$500 into a savings account at a local bank that pays an interest of 4.5% per year. How much money will he have in his bank account at the end of 1 year?

11 Mr. Hill invested \$5,500 in an investment fund with a local bank. The bank paid 7% interest at the end of each year. How much money did Mr. Hill have in his investment account at the end of 1 year?

Solve. Draw a bar model to help you.

Example

Luna borrowed \$640 to buy a cell phone from Company Wells. She paid 7% interest in the first year. How much interest did Luna pay in the first year?



$$100\% \rightarrow \underline{\$640}$$

$$1\% \rightarrow \underline{\$640} \div \underline{100}$$

$$= \underline{\$6.40}$$

$$\underline{7}\% \rightarrow \underline{\$6.40} \times \underline{7}$$

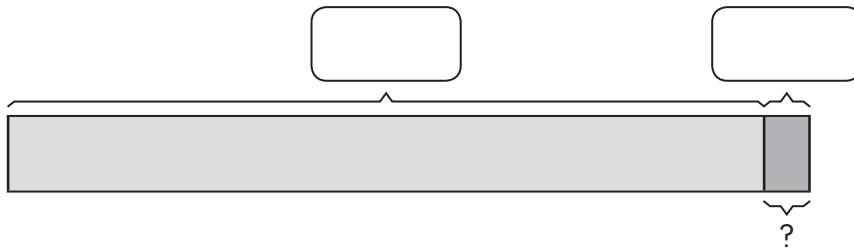
$$= \underline{\$44.80}$$

Interest here is the amount of money you pay to the company for borrowing money from them.



Luna paid \$44.80 interest in the first year.

- 12 Mr. Taylor forgot to pay his electricity bill of \$270 for the month of February. An interest of 4% per month is charged on any unpaid bill. How much interest was charged to Mr. Taylor after 1 month?



$$100\% \rightarrow \underline{\hspace{2cm}}$$

$$1\% \rightarrow \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}}\% \rightarrow \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Mr. Taylor was charged with interest after 1 month.

- 13 Vanessa got a student loan of \$ 13,000 from a bank that charged 3% interest per year. How much interest did Vanessa pay for the first year?

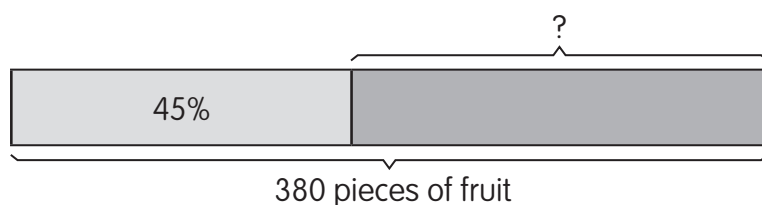
Solve. Draw a bar model to help you.

Example

There are 380 pieces of fruit. 45% of the pieces of fruit are strawberries and the rest are raspberries. How many raspberries are there?

$$\begin{aligned} \text{Percent of raspberries} &= \underline{100\%} - \underline{45\%} \\ &= \underline{55\%} \end{aligned}$$

Method 1



The total number of pieces of fruit is 100%.



$$100\% \rightarrow \underline{380}$$

$$\begin{aligned} 1\% &\rightarrow \underline{380} \div \underline{100} \\ &= \underline{3.8} \end{aligned}$$

$$\begin{aligned} \underline{55}\% &\rightarrow \underline{3.8} \times \underline{55} \\ &= \underline{209} \end{aligned}$$

There are 209 raspberries.

Method 2

$$\begin{aligned} 55\% \text{ of total fruits} &= \underline{\frac{55}{100}} \times \underline{380} \\ &= \underline{209} \end{aligned}$$

There are 209 raspberries.

14 A metal rod weighs 16.25 ounces. 84% of the rod is silver and the rest is iron. How many ounces of iron are in the rod?

15 A cricket team won 70% of the total matches it played during the year. If the team lost 18 matches in all and no matches were drawn, how many matches did the cricket team play in all during the year?

Chapter 10 Percent

Activity 1 Percent

- 1 17
 $\frac{17}{100}$
- 2 33
 $\frac{33}{100}$
- 3 56
 $\frac{56}{100}$

4 35
 $\frac{35}{100}$
35%

$\frac{65}{100}$
65%

5 44
 $\frac{44}{100}$
44%

$\frac{56}{100}$
56%

6 40
 $\frac{40}{100}$
40%

$\frac{60}{100}$
60%

7 20
 $\frac{20}{100}$
20%

$\frac{80}{100}$
80%

8 8%

9 90%

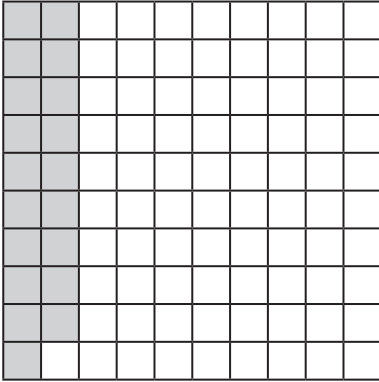
10 19%

11 37%

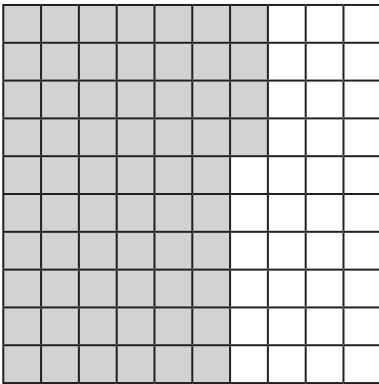
12 42%
58%

13 36%
64%

14 19
19



15



16 23%

17 9%

18 87%

19 12%

20 44

21 38

22 99

23 6

Activity 2 Fractions, Decimals, and Percent

- 1 $\frac{8}{100}$
- 2 $\frac{46}{100}$
- 3 0.17
- 4 0.69
- 5 $\frac{25}{100}$

6 $\frac{61}{100}$

7 $\frac{4}{5}$

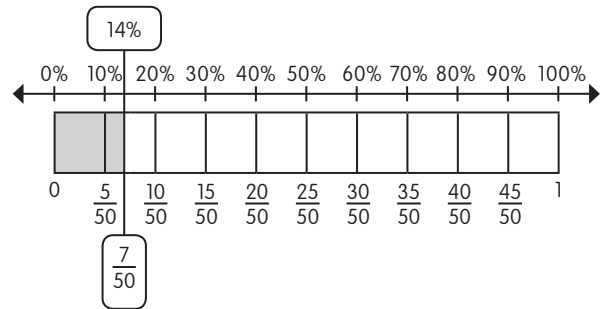
8 $\frac{12}{25}$

9 Method 1

$$14\% = \frac{14}{100}$$

$$= \frac{7}{50}$$

Method 2



10 $22\% = \frac{22}{100}$

$$= \frac{11}{50}$$

11 $46\% = \frac{46}{100}$

$$= \frac{23}{50}$$

12 $55\% = \frac{55}{100}$

$$= \frac{11}{20}$$

13 $72\% = \frac{72}{100}$

$$= \frac{18}{25}$$

14 $25\% = \frac{25}{100}$

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

$$\begin{aligned} 15 \quad 68\% &= \frac{68}{100} \\ &= \frac{17}{25} \end{aligned}$$

$$\begin{aligned} 16 \quad 13\% &= \frac{13}{100} \\ &= 0.13 \end{aligned}$$

$$\begin{aligned} 17 \quad 28\% &= \frac{28}{100} \\ &= 0.28 \end{aligned}$$

$$\begin{aligned} 18 \quad 34\% &= \frac{34}{100} \\ &= 0.34 \end{aligned}$$

$$\begin{aligned} 19 \quad 7\% &= \frac{7}{100} \\ &= 0.07 \end{aligned}$$

$$\begin{aligned} 20 \quad 41\% &= \frac{41}{100} \\ &= 0.41 \end{aligned}$$

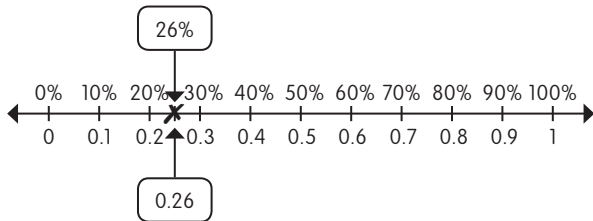
$$\begin{aligned} 21 \quad 66\% &= \frac{66}{100} \\ &= 0.66 \end{aligned}$$

$$22 \quad 0.26 = \underline{26}\%$$

Method 1

$$\begin{aligned} 0.26 &= \frac{26}{100} \\ &= \underline{26}\% \end{aligned}$$

Method 2



$$0.26 = \underline{26}\%$$

Method 3

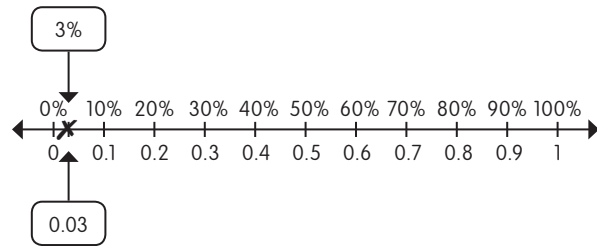
$$\begin{aligned} 0.26 &= \frac{0.26}{1} \times \frac{100}{100} \\ &= \underline{26}\% \end{aligned}$$

$$23 \quad 0.03 = \underline{3}\%$$

Method 1

$$\begin{aligned} 0.03 &= \frac{3}{100} \\ &= \underline{3}\% \end{aligned}$$

Method 2



$$0.03 = \underline{3}\%$$

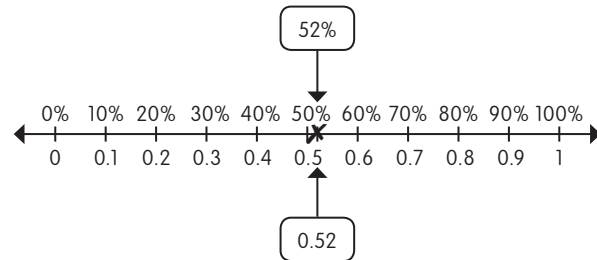
Method 3

$$\begin{aligned} 0.03 &= \frac{0.03}{1} \times \frac{100}{100} \\ &= \underline{3}\% \end{aligned}$$

$$24 \quad \text{Method 1}$$

$$\begin{aligned} 0.52 &= \frac{52}{100} \\ &= 52\% \end{aligned}$$

Method 2



$$0.52 = 52\%$$

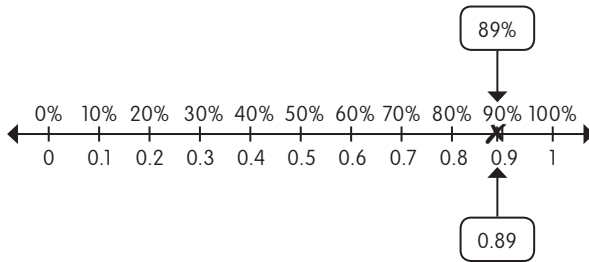
Method 3

$$\begin{aligned} 0.52 &= 0.52 \times 100\% \\ &= 52\% \end{aligned}$$

$$25 \quad \text{Method 1}$$

$$\begin{aligned} 0.89 &= \frac{89}{100} \\ &= 89\% \end{aligned}$$

Method 2



$0.89 = 89\%$

Method 3

$0.89 = 0.89 \times 100\%$
 $= 89\%$

26 Method 1

$0.05 = \frac{5}{100}$
 $= 5\%$

Method 2



$0.05 = 5\%$

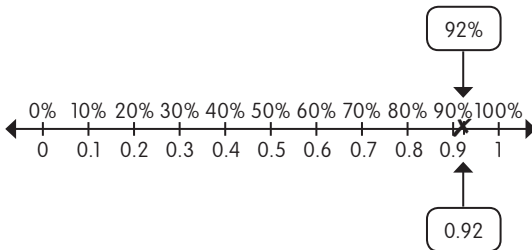
Method 3

$0.05 = 0.05 \times 100\%$
 $= 5\%$

27 Method 1

$0.92 = \frac{92}{100}$
 $= 92\%$

Method 2



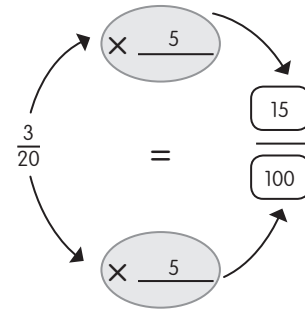
$0.92 = 92\%$

Method 3

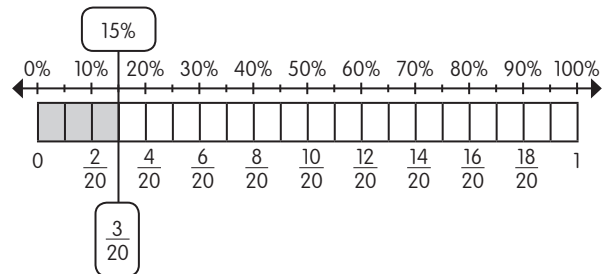
$0.92 = 0.92 \times 100\%$
 $= 92\%$

28 $\frac{3}{20} = 15\%$
 $20 \times \underline{5} = 100$

Method 1



Method 2



$\frac{3}{20} = 15\%$

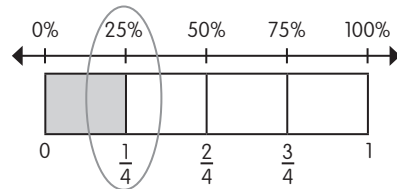
Method 3

$\frac{3}{20} = \frac{3}{20} \times 100\%$
 $= 15\%$

29 Method 1

$\frac{1}{4} = \frac{25}{100}$
 $= 25\%$

Method 2



$\frac{1}{4} = 25\%$

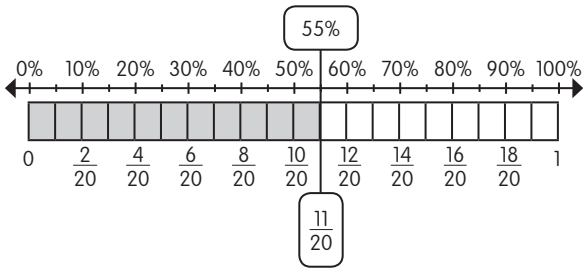
Method 3

$\frac{1}{4} = \frac{1}{4} \times 100\%$
 $= 25\%$

30 Method 1

$\frac{11}{20} = \frac{55}{100}$
 $= 55\%$

Method 2



$$\frac{11}{20} = 55\%$$

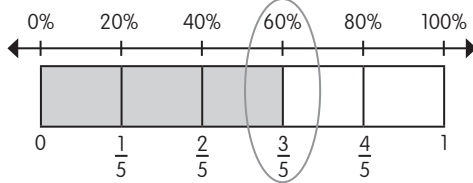
Method 3

$$\frac{11}{20} = \frac{11}{20} \times 100\% = 55\%$$

31 Method 1

$$\frac{3}{5} = \frac{60}{100} = 60\%$$

Method 2



$$\frac{3}{5} = 60\%$$

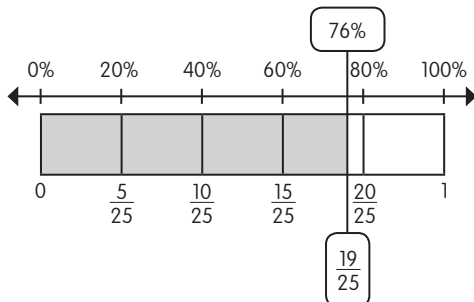
Method 3

$$\frac{3}{5} = \frac{3}{5} \times 100\% = 60\%$$

32 Method 1

$$\frac{19}{25} = \frac{76}{100} = 76\%$$

Method 2



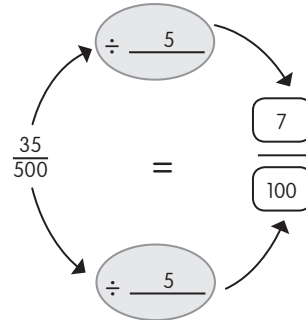
$$\frac{19}{25} = 76\%$$

Method 3

$$\frac{19}{25} = \frac{19}{25} \times 100\% = 76\%$$

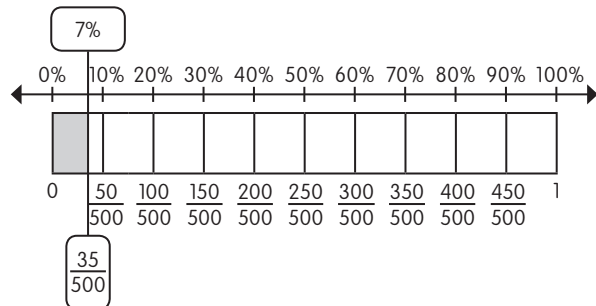
33 $\frac{35}{500} = 7\%$
 $500 \div 5 = 100$

Method 1



Method 2

$$\frac{35}{500} = 7\%$$



Method 3

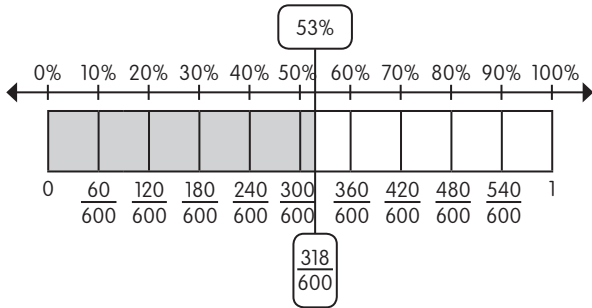
$$\frac{35}{500} = \frac{35}{500} \times 100\% = \frac{7}{100} = 7\%$$

34 Method 1

$$\frac{318}{600} = \frac{53}{100} = 53\%$$

Method 2

$$\frac{318}{600} = 53\%$$

**Method 3**

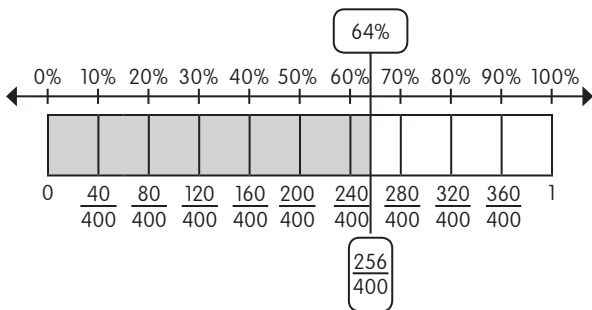
$$\begin{aligned} \frac{318}{600} &= \frac{318}{600} \times 100\% \\ &= 53\% \end{aligned}$$

35 Method 1

$$\begin{aligned} \frac{256}{400} &= \frac{64}{100} \\ &= 64\% \end{aligned}$$

Method 2

$$\frac{256}{400} = 64\%$$

**Method 3**

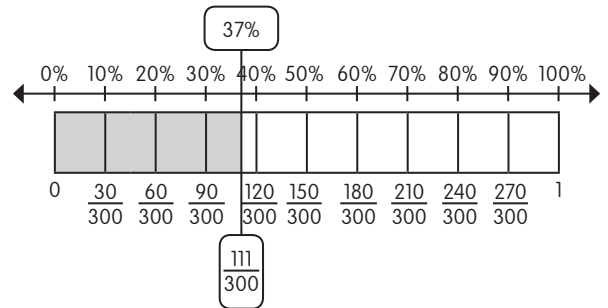
$$\begin{aligned} \frac{256}{400} &= \frac{256}{400} \times 100\% \\ &= 64\% \end{aligned}$$

36 Method 1

$$\begin{aligned} \frac{111}{300} &= \frac{37}{100} \\ &= 37\% \end{aligned}$$

Method 2

$$\frac{111}{300} = 37\%$$

**Method 3**

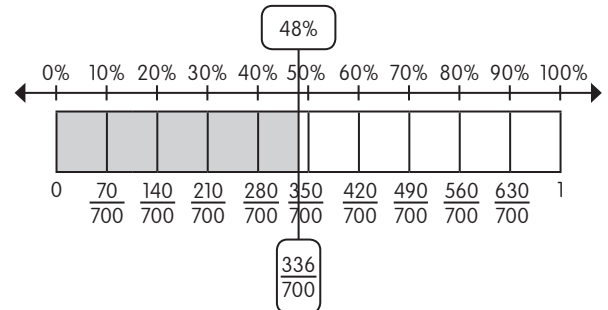
$$\begin{aligned} \frac{111}{300} &= \frac{111}{300} \times 100\% \\ &= 37\% \end{aligned}$$

37 Method 1

$$\begin{aligned} \frac{336}{700} &= \frac{48}{100} \\ &= 48\% \end{aligned}$$

Method 2

$$\frac{336}{700} = 48\%$$

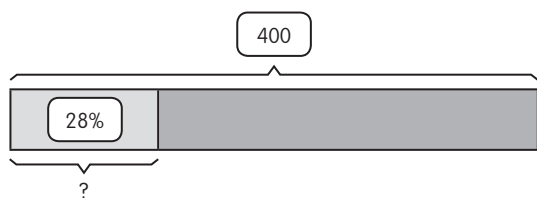
**Method 3**

$$\begin{aligned} \frac{336}{700} &= \frac{336}{700} \times 100\% \\ &= 48\% \end{aligned}$$

Activity 3 Percent of a Quantity

- 1 45
- 2 30
- 3 36
- 4 42
- 5 78
- 6 56

7 Method 1

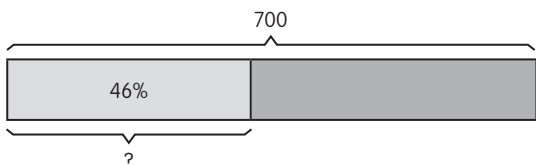


$$\begin{aligned} 100\% &\rightarrow \frac{400}{100} \\ 1\% &\rightarrow \frac{400}{100} \div 100 \\ &= \frac{4}{100} \\ 28\% &\rightarrow \frac{28}{100} \times \frac{400}{1} \\ &= \frac{112}{1} \end{aligned}$$

Method 2

$$\begin{aligned} 28\% \text{ of } 400 &= \frac{28}{100} \times 400 \\ &= \frac{28}{100} \times 400 \\ &= 112 \end{aligned}$$

8 Method 1

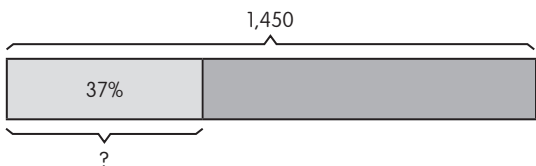


$$\begin{aligned} 100\% &\rightarrow 700 \\ 1\% &\rightarrow 700 \div 100 \\ &= 7 \\ 46\% &\rightarrow 46 \times 7 \\ &= 322 \end{aligned}$$

Method 2

$$\begin{aligned} 46\% \text{ of } 700 &= 46\% \times 700 \\ &= \frac{46}{100} \times 700 \\ &= 322 \end{aligned}$$

9 Method 1

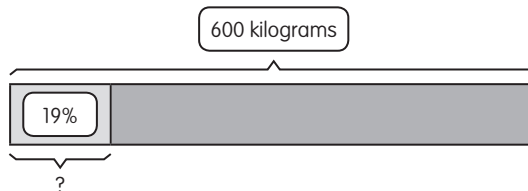


$$\begin{aligned} 100\% &\rightarrow 1,450 \\ 1\% &\rightarrow 1,450 \div 100 \\ &= 14.5 \\ 37\% &\rightarrow 37 \times 14.5 \\ &= 536.5 \end{aligned}$$

Method 2

$$\begin{aligned} 37\% \text{ of } 1,450 &= 37\% \times 1,450 \\ &= \frac{37}{100} \times 1,450 \\ &= 536.5 \end{aligned}$$

10 Method 1

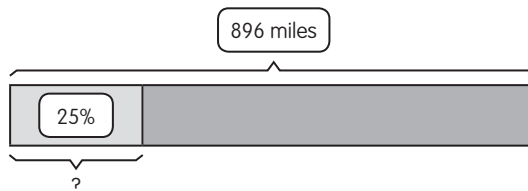


$$\begin{aligned} 100\% &\rightarrow \frac{600}{100} \text{ kilograms} \\ 1\% &\rightarrow \frac{600}{100} \div 100 \\ &= \frac{6}{100} \text{ kilograms} \\ 19\% &\rightarrow \frac{19}{100} \times \frac{600}{1} \\ &= \frac{114}{1} \text{ kilograms} \end{aligned}$$

Method 2

$$\begin{aligned} 19\% \text{ of } 600 \text{ kilograms} &= \frac{19}{100} \times 600 \\ &= \frac{19}{100} \times 600 \\ &= 114 \text{ kilograms} \end{aligned}$$

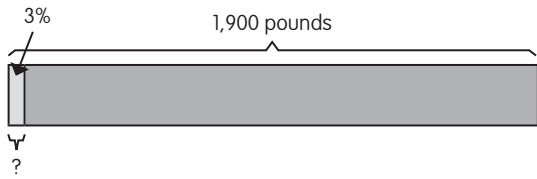
11 Method 1



$$\begin{aligned} 100\% &\rightarrow \frac{896}{100} \text{ miles} \\ 1\% &\rightarrow \frac{896}{100} \div 100 \\ &= \frac{8.96}{100} \text{ miles} \\ 25\% &\rightarrow \frac{25}{100} \times \frac{896}{1} \\ &= \frac{224}{1} \text{ miles} \end{aligned}$$

Method 2

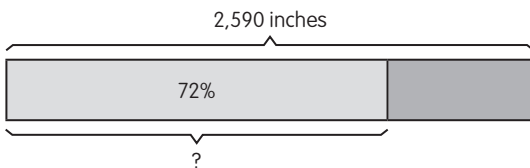
$$\begin{aligned} 25\% \text{ of } 896 \text{ miles} &= \frac{25}{100} \times 896 \\ &= \frac{25}{100} \times 896 \\ &= 224 \text{ miles} \end{aligned}$$

12 Method 1

$$\begin{aligned} 100\% &\rightarrow 1,900 \text{ pounds} \\ 1\% &\rightarrow 1,900 \div 100 \\ &= 19 \text{ pounds} \\ 3\% &\rightarrow 3 \times 19 \\ &= 57 \text{ pounds} \end{aligned}$$

Method 2

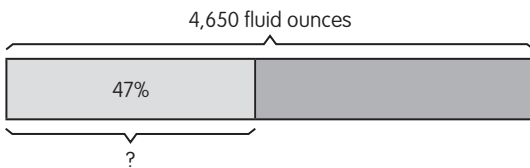
$$\begin{aligned} 3\% \text{ of } 1,900 \text{ pounds} &= 3\% \times 1,900 \\ &= \frac{3}{100} \times 1,900 \\ &= 57 \text{ pounds} \end{aligned}$$

13 Method 1

$$\begin{aligned} 100\% &\rightarrow 2,590 \text{ inches} \\ 1\% &\rightarrow 2,590 \div 100 \\ &= 25.9 \text{ inches} \\ 72\% &\rightarrow 72 \times 25.9 \\ &= 1,864.8 \text{ inches} \end{aligned}$$

Method 2

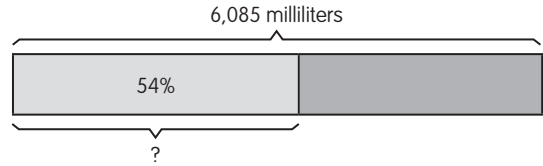
$$\begin{aligned} 72\% \text{ of } 2,590 \text{ inches} &= 72\% \times 2,590 \\ &= \frac{72}{100} \times 2,590 \\ &= 1,864.8 \text{ inches} \end{aligned}$$

14 Method 1

$$\begin{aligned} 100\% &\rightarrow 4,650 \text{ fluid ounces} \\ 1\% &\rightarrow 4,650 \div 100 \\ &= 46.5 \text{ fluid ounces} \\ 47\% &\rightarrow 47 \times 46.5 \\ &= 2,185.5 \text{ fluid ounces} \end{aligned}$$

Method 2

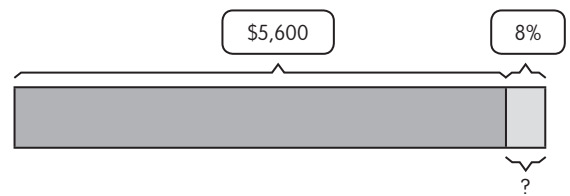
$$\begin{aligned} 47\% \text{ of } 4,650 \text{ fluid ounces} &= 47\% \times 4,650 \\ &= \frac{47}{100} \times 4,650 \\ &= 2,185.5 \text{ fluid ounces} \end{aligned}$$

15 Method 1

$$\begin{aligned} 100\% &\rightarrow 6,085 \text{ milliliters} \\ 1\% &\rightarrow 6,085 \div 100 \\ &= 60.85 \text{ milliliters} \\ 54\% &\rightarrow 54 \times 60.85 \\ &= 3,285.9 \text{ milliliters} \end{aligned}$$

Method 2

$$\begin{aligned} 54\% \text{ of } 6,085 \text{ milliliters} &= 54\% \times 6,085 \\ &= \frac{54}{100} \times 6,085 \\ &= 3,285.9 \text{ milliliters} \end{aligned}$$

Activity 4 Real-World Problems: Percent**1 Method 1**

$$\begin{aligned}
 100\% &\rightarrow \$5,600 \\
 1\% &\rightarrow \frac{\$5,600}{100} \\
 &= \$56 \\
 8\% &\rightarrow \$56 \times 8 \\
 &= \$448
 \end{aligned}$$

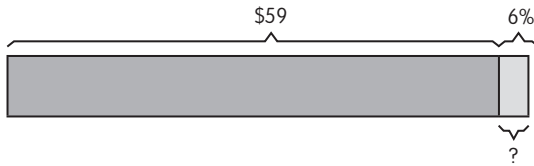
The sales tax was \$448.

Method 2

$$\begin{aligned}
 8\% \text{ of } \$5,600 &= \frac{8}{100} \times 5,600 \\
 &= \$448
 \end{aligned}$$

The sales tax was \$448.

2 Method 1

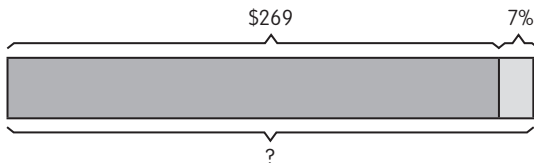


100% → \$59
 1% → $\$59 \div 100$
 = \$0.59
 6% → $\$0.59 \times 6$
 = \$3.54
 Mr. Nelson paid \$3.54.

Method 2

6% of \$59 = $\frac{6}{100} \times 59$
 = \$3.54
 Mr. Nelson paid \$3.54.

3 Method 1



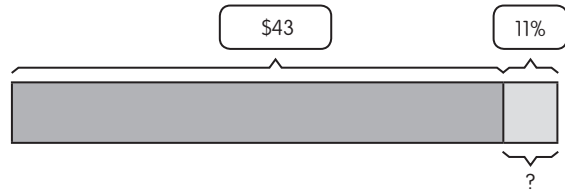
100% → \$269
 1% → $\$269 \div 100$
 = \$2.69
 7% → $\$2.69 \times 7$
 = \$18.83
 Total cost = $\$269 + \18.83
 = \$287.83
 The total cost of the surfboard including sales tax was \$287.83.

Method 2

7% of \$269 = $\frac{7}{100} \times 269$
 = \$18.83
 Total cost = $\$269 + \18.83
 = \$287.83
 The total cost of the surfboard including sales tax was \$287.83.

4 Combined tax = $\frac{6}{11\%} + \frac{5}{11\%}$

Method 1



100% → \$43
 1% → $\frac{\$43}{100}$
 = \$0.43
 11% → $\$0.43 \times 11$
 = \$4.73
 The combined tax was \$4.73.

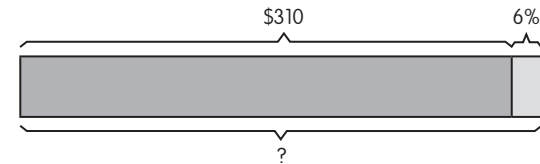
Method 2

11% of \$43 = $\frac{11}{100} \times 43$
 = \$4.73

The combined tax was \$4.73.

5 Combined tax = $4 + 2$
 = 6%

Method 1

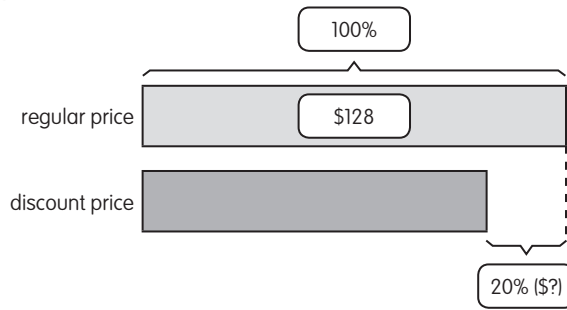


100% → \$310
 1% → $\$310 \div 100$
 = \$3.10
 6% → $\$3.10 \times 6$
 = \$18.60
 Total cost of family value meal including taxes
 = $\$310 + \18.60
 = \$328.60
 The total cost of the family value meal including taxes was \$328.60.

Method 2

6% of \$310 = $\frac{6}{100} \times 310$
 = \$18.60
 Total cost of family value meal including taxes
 = $\$310 + \18.60
 = \$328.60
 The total cost of the family value meal including taxes was \$328.60.

6 Method 1



$$\begin{aligned}
 100\% &\rightarrow \$128 \\
 1\% &\rightarrow \$128 \div 100 \\
 &= \$1.28 \\
 20\% &\rightarrow \$1.28 \times 20 \\
 &= \$25.60
 \end{aligned}$$

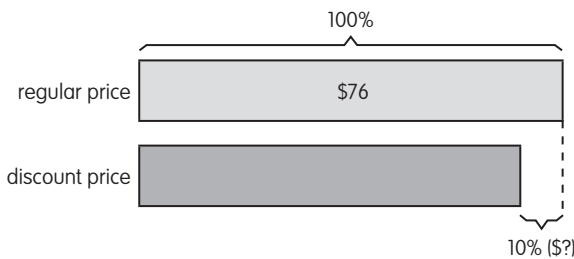
The discount is \$25.60.

Method 2

$$\begin{aligned}
 \text{Discount} &= 20\% \text{ of regular price} \\
 &= \frac{20}{100} \times \$128 \\
 &= \$25.60
 \end{aligned}$$

The discount is \$25.60.

7 Method 1



$$\begin{aligned}
 100\% &\rightarrow \$76 \\
 1\% &\rightarrow \$76 \div 100 \\
 &= \$0.76 \\
 10\% &\rightarrow \$0.76 \times 10 \\
 &= \$7.60
 \end{aligned}$$

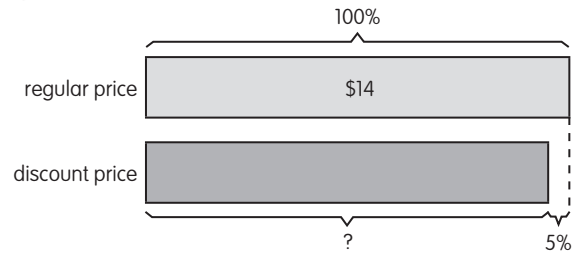
The discount was \$7.60.

Method 2

$$\begin{aligned}
 \text{Discount} &= 10\% \text{ of regular price} \\
 &= \frac{10}{100} \times \$76 \\
 &= \$7.60
 \end{aligned}$$

The discount was \$7.60.

8 Method 1

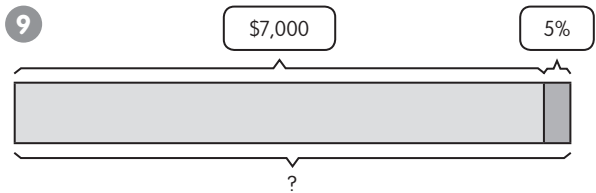


$$\begin{aligned}
 100\% &\rightarrow \$14 \\
 1\% &\rightarrow \$14 \div 100 \\
 &= \$0.14 \\
 5\% &\rightarrow \$0.14 \times 5 \\
 &= \$0.70 \\
 \$14 - \$0.70 &= \$13.30 \\
 \text{Farrah paid } &\$13.30.
 \end{aligned}$$

Method 2

$$\begin{aligned}
 \text{Discount} &= 5\% \text{ of regular price} \\
 &= \frac{5}{100} \times \$14 \\
 &= \$0.70 \\
 \$14 - \$0.70 &= \$13.30 \\
 \text{Farrah paid } &\$13.30.
 \end{aligned}$$

9

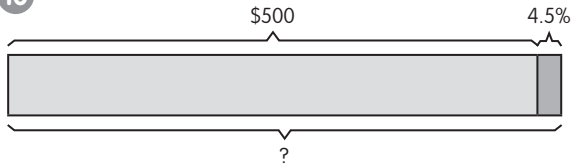


$$\begin{aligned}
 \text{Interest} &= 5\% \text{ of } \$7,000 \\
 &= \frac{5}{100} \times \$7,000 \\
 &= \$350
 \end{aligned}$$

$$\begin{aligned}
 \text{Money invested} + \text{Interest} &= \$7,000 + \$350 \\
 &= \$7,350
 \end{aligned}$$

Ms. Lopez had \$7,350 in her investment account at the end of 1 year.

10



Interest = 4.5% of \$500

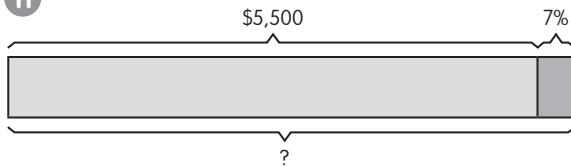
$$= \frac{4.5}{100} \times \$500$$

$$= \$22.50$$

$$\text{Money deposited} + \text{Interest} = \$500 + \$22.50 = \$522.50$$

Ricardo will have \$522.50 in his bank account at the end of 1 year.

11



Interest = 7% of \$5,500

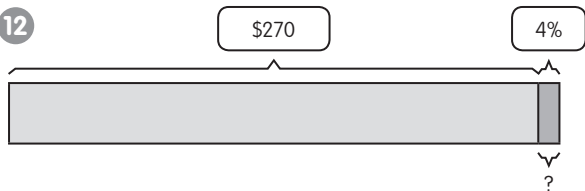
$$= \frac{7}{100} \times \$5,500$$

$$= \$385$$

$$\text{Money invested} + \text{Interest} = \$5,500 + \$385 = \$5,885$$

Mr. Hill had \$5,885 in his investment account at the end of 1 year.

12



$$100\% \rightarrow \underline{\$270}$$

$$1\% \rightarrow \underline{\$270} \div \underline{100}$$

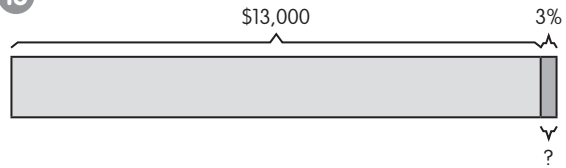
$$= \underline{\$2.70}$$

$$\underline{4\%} \rightarrow \underline{\$2.70} \times \underline{4}$$

$$= \underline{\$10.80}$$

Mr. Taylor was charged with \$10.80 interest after 1 month.

13



100% → \$13,000

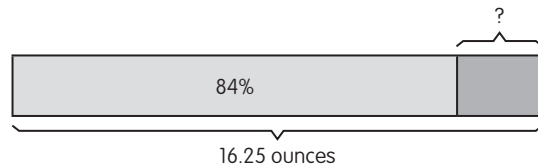
$$1\% \rightarrow \$13,000 \div 100 = \$130$$

$$3\% \rightarrow \$130 \times 3 = \$390$$

Vanessa paid \$390 interest for the first year.

14

$$\text{Percent of iron} = 100\% - 84\% = 16\%$$

Method 1

100% → 16.25 oz

$$1\% \rightarrow 16.25 \div 100 = 0.1625 \text{ oz}$$

$$16\% \rightarrow 0.1625 \times 16 = 2.6 \text{ oz}$$

2.6 ounces of iron are in the rod.

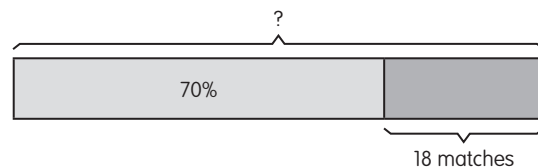
Method 2

$$16\% \text{ of weight of metal rod} = \frac{16}{100} \times 16.25 = 2.6 \text{ oz}$$

2.6 ounces of iron are in the rod.

15

$$\text{Percent of lost matches} = 100\% - 70\% = 30\%$$



30% → 18

$$1\% \rightarrow 18 \div 30 = 0.6$$

$$100\% \rightarrow 0.6 \times 100 = 60$$

The cricket team played 60 matches in all during the year.