Name: _____ Date: _____

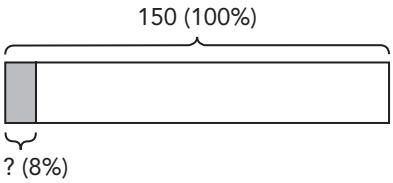
Lesson 6.3 Percent of a Quantity

Complete. Use the models to help you.

Example

What is 8% of 150?

Method 1



The model shows that:

100% → 150

1% → $\frac{150}{100} = 1.5$

8% → $8 \times 1.5 = 12$

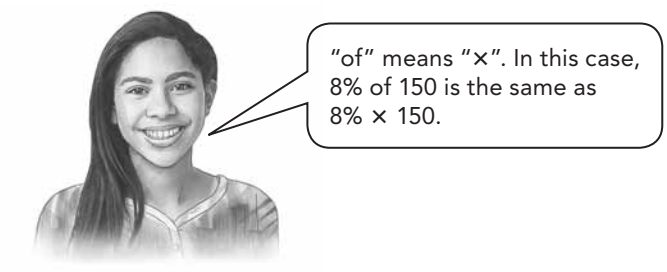
8% of 150 is 12.

Method 2

8% of 150 = $\frac{8}{100}$ × 150

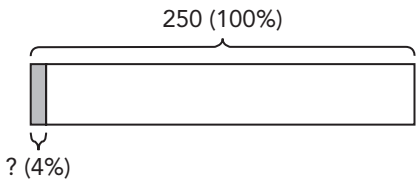
= 12

8% of 150 is 12.



1. What is 4% of 250?

Method 1



The model shows that:

100% → 250

1% → _____

4% → _____

4% of 250 is _____.

Method 2

4% of 250 = _____ × _____

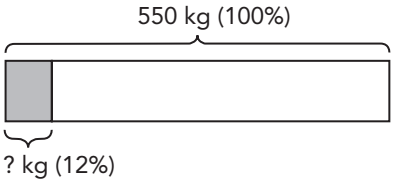
= _____

4% of 250 is _____.

Name: _____ Date: _____

2. What is 12% of 550 kilograms?

Method 1



The model shows that:

100% → 550 kg

1% → _____ kg

12% → _____ kg

12% of 550 kilograms is

_____ kilograms.

Method 2

12% of 550 kg = _____ × _____

= _____ kg

12% of 550 kilograms is

_____ kilograms.

Find the percent of each whole.

3. 35% of 900

Method 1

4. 115% of $360

Method 1

5. 82% of 450

Method 2

6. 170% of 2,100 ft

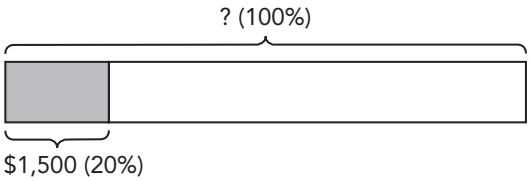
Method 2

Name: _____ Date: _____

Solve. Use the models to help you.

Example

Ray spent 20% of his savings to buy a $1,500 computer. How much savings did he have before he bought the computer?



The model shows that:

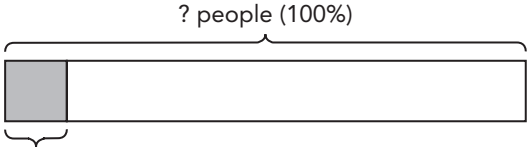
20% → $1,500

1% → $\$\frac{1{,}500}{20} = \$75$

100% → $100 \times \$75 = \$7{,}500$

Ray had $7,500 in his savings before he bought the computer.

7. At a movie theater, 12% of the people were children, and the rest were adults. There were 36 children. How many people were at the movie theater in all?



The model shows that:

12% → 36 people

1% → _____ people

100% → _____ people

There were _____ people at the movie theater in all.

Solve. You may draw models to help you.

8. Jenny made 520 walnut biscuits. This is 40% of the total number of biscuits that she made. How many biscuits did she make in all?

40% → _____ biscuits

1% → _____ biscuits

100% → _____ biscuits

Jenny made _____ biscuits in all.

Name: _____ Date: _____

9. 28% of the eggs in a basket are quail eggs, and the rest are chicken eggs. There are 140 quail eggs. How many eggs are in the basket in all?

10. Keith has 34% of his stamps in an album. If there are 204 stamps in the album, how many stamps does he have in all?

Solve.

Example

15% of a number is 180. Find the number.

15% → 180

1% → $\frac{180}{15}$

100% → $100 \times \frac{180}{15} = 1{,}200$

The number is 1,200.

11. 40% of a number is 180.

Find the number.

40% → 180

1% → _____

100% → _____

The number is _____.

12. 75% of a number is 230.

Find the number.

75% → 230

1% → _____

100% → _____

The number is _____.

Complete.

13. 25% of _____ is 195.

14. 56% of _____ is 70.

19. $25.5\% = \frac{25.5}{100}$

$= \frac{255}{1{,}000}$

$= \frac{51}{200}$

20. $6.02\% = \frac{6.02}{100}$

$= \frac{602}{10{,}000}$

$= \frac{301}{5{,}000}$

21. $\frac{89}{1{,}000}$ **22.** $\frac{1{,}517}{10{,}000}$

23. $\frac{137}{250}$ **24.** $\frac{1{,}387}{2{,}000}$

Lesson 6.3

1. Method 1

The model shows that:

100% → 250

1% → $\frac{250}{100}$ = 2.5

4% → 4 × 2.5 = 10

4% of 250 is 10.

Method 2

4% of 250 = $\frac{4}{100}$ × 250

= 10

4% of 250 is 10.

2. Method 1

The model shows that:

100% → 550 kg

1% → $\frac{550}{100}$ = 5.5 kg

12% → 12 × 5.5 = 66 kg

12% of 550 kilograms is 66 kilograms.

Method 2

12% of 550 kg = $\frac{12}{100}$ × 550

= 66 kg

12% of 550 kilograms is 66 kilograms.

3. 315 **4.** $414

5. 369 **6.** 3,570 feet

7. The model shows that:

12% → 36 people

1% → $\frac{36}{12}$ = 3 people

100% → 100 × 3 = 300 people

There were 300 people at the movie theatre in all.

8. 40% → 520 biscuits

1% → $\frac{520}{40}$ = 13 biscuits

100% → 100 × 13 = 1,300 biscuits

Jenny made 1,300 biscuits in all.

9. 500 eggs **10.** 600 stamps

11. 40% → 180

1% → $\frac{180}{40}$

100% → $100 \times \frac{180}{40} = 450$

The number is 450.

12. 75% → 230

1% → $\frac{230}{75}$

100% → $100 \times \frac{230}{75} = 306\frac{2}{3}$

The number is $306\frac{2}{3}$.

13. 780 **14.** 125

Lesson 6.4

1. a) Method 1

Fraction of the quilts Denise sold

= $\frac{\text{Number of quilts sold}}{\text{Total number of quilts}}$

= $\frac{12}{40}$

= $\frac{3}{10}$

$\frac{3}{10} \times 100\% = 30\%$

Denise sold 30% of the quilts.

Method 2

40 quilts → 100%

1 quilt → $\frac{100}{40}\%$

12 quilts → $12 \times \frac{100}{40}\% = 30\%$

Denise sold 30% of the quilts.

b) 100% − 30% = 70%

Denise did not sell 70% of the quilts.

2. a) 20% **b)** 80%

3. a) 75% **b)** 25%

4. Method 1

Sales tax = 7% of $820

= $\frac{7}{100}$ × $820

= $57.40

$820 + $57.40 = $877.40

Janice paid $877.40 in total for her airfare.