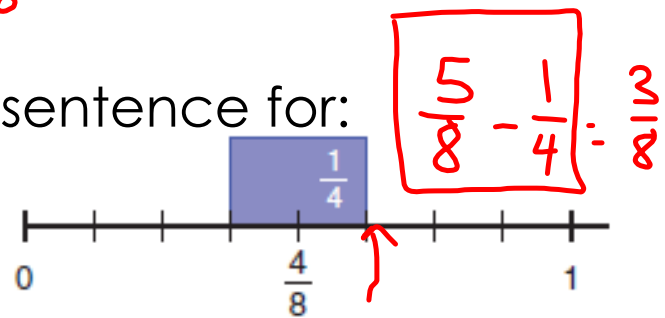


1) BEDMAS:  $6 + 2 \times 7 = 6 + 14 = 20$

2)  $0.5 \times 16 = 8$

3)  $\$1.75 + \$2.45 = 4.20$

4) Write a subtraction sentence for:



5)  $99 \div 9 = 11$

6)  $0.4 \times 3 = 1.2$

7) Change to a Mixed Fraction:

$$\frac{15}{4} = 3 \frac{3}{4}$$

8)  $13 \times 20 = 260$

9)  $8004 \div 4 = 2001$

10) What is a common denominator for 2 and 5? 10 30

$$\frac{18 \div 2}{200 \div 2} = \frac{9}{100}$$

Check our work...Page 112 and 113  
Worksheet

$$25 \times 4 \sqrt{100}$$

$$\frac{90}{100} = 0.90000$$

$$0.90$$

$$0.9$$

$$2 \times \frac{2}{100} \% = \frac{2}{100} = 0.02$$

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

$$\frac{9 \times 10}{10 \times 10} = \frac{90}{100}$$

**3.8****Solving Percent Problems****Focus** | Solve problems involving percents to 100%.

When shopping, it is often useful to be able to calculate a percent, to find the sale price, the final price, or to decide which of two offers is the better deal.

## Explore



A jacket originally cost \$48.00.

It is on sale for 25% off.

What is the sale price of the jacket?

How much is saved by buying the jacket on sale?



$$\frac{1}{4} \times 24 = \frac{24}{4}$$

$$\frac{1}{2} \times 16 = \frac{16}{2}$$

% of a number.

A paperback novel originally cost \$7.99.

It is on sale for 15% off.

To find how much you save, calculate 15% of \$7.99.

$15\% = \frac{15}{100} = 0.15$

So, 15% of \$7.99 =  $\frac{15}{100}$  of 7.99

=  $0.15 \times 7.99$

Use a calculator.

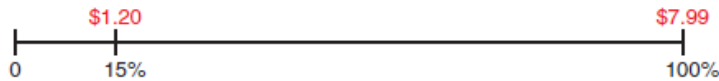
$0.15 \times 7.99 = 1.1985$

So,  $0.15 \times \$7.99 = \$1.1985$

\$1.1985 to the nearest cent is \$1.20.

You save \$1.20 by buying the book on sale.

We can show this on a number line.



$\frac{24}{100} = 0.24$

$15 \times 7.99$

$0.15 \times 8$



$$\begin{array}{r} 4 \\ \times 15 \\ \hline 20 \\ 60 \\ \hline 1.20 \end{array}$$

$$\begin{array}{r} 10 \times 8 = 80 \\ 5 \times 8 = 40 \\ \hline 120 \end{array}$$

**Example**

Sandi works at Fancies Flowers on Saturdays.  
 The owner pays Sandi 3% of all money she takes in on a day.  
 Last Saturday, Sandi took in \$1200.00.  
 How much money did Sandi earn last Saturday?  
 Illustrate the answer on a number line.

**A Solution**

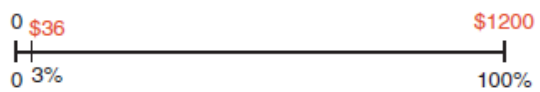
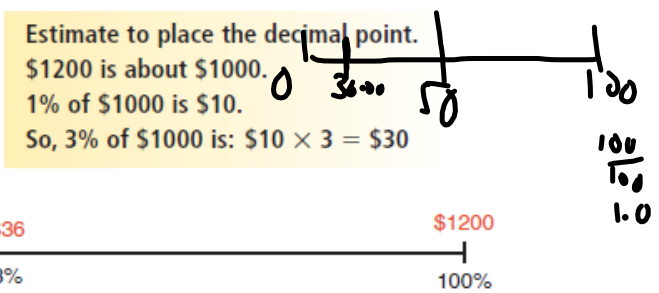
Sandi took in \$1200.00.  
 We want to find 3% of \$1200.00.  
 3% is  $\frac{3}{100} = 0.03$   
 So, 3% of \$1200 =  $0.03 \times 1200$   
 Ignore the decimal point and multiply as whole numbers.

$$\begin{array}{r} 1200 \\ \times 3 \\ \hline 3600 \end{array}$$

So,  $0.03 \times \$1200 = \$36.00$   
 Sandi earned \$36.00 last Saturday.  
 Show this on a number line.

- ① 3% of 1200.00
- ②  $\frac{3}{100} = 0.03$
- ③  $0.03 \times 1200 = 36.00$
- ④ stick \$36.00

**Another Strategy**  
 We could find 1% of \$1200.00, then multiply by 3.



Practice

$$4 \overline{) 60} \begin{array}{r} 15 \\ 40 \\ \hline 20 \\ 20 \\ \hline 0 \end{array}$$

1. Calculate.

a) 10% of 30

b) 20% of 50

c) 18% of 36

d) 67% of 112

2. The regular price of a radio is \$60.00.

\* Find the sale price before taxes when the radio is on sale for:

a) 25% off

b) 30% off

c) 40% off



3.8 Solving Percent Problems

115

1 a) 10% of 30

$$\frac{10}{100} = 0.10$$

$$0.10 \times 30$$

$$= 3.00$$

Exit slip  
p. 116  
ques. 4c only

p. 116-g. 3, 5, 7 a, b

Round prices up

b) 30% of 60.00

$$0.30 \times 60 = 18.00$$

$$60 - 18 = 42.00$$

10% of 32.70

3. Find the sale price before taxes of each item.

- a) coat: 55% off \$90      b) shoes: 45% off \$40      c) sweater: 30% off \$50

4. Find the tip left by each customer at a restaurant.

- a) Denis: 15% of \$24.20      b) Molly: 20% of \$56.50      c) Tudor: 10% of \$32.70

5. The Goods and Services tax (GST) is currently 6%.

For each item below:

i) Find the GST.

ii) Find the cost of the item including GST.

- a) bicycle: \$129.00      b) DVD: \$24.99      c) skateboard: \$42.97

6. There are 641 First Nations bands in Canada.

About 30% of these bands are in British Columbia.

About how many bands are in British Columbia?

Sketch a number line to show your answer.

$$\begin{array}{r} 0.55 \times 90 \\ 50 \times 90 = 4500 \\ 5 \times 90 = 450 \\ \hline 4950 \end{array}$$



