

Estimate to check if the answer is reasonable.

15% is about 20%, which is  $\frac{1}{5}$ .

\$7.99 is about \$10.00.

So,  $0.15 \times 7.99$  is about  $\frac{1}{5}$  of 10, which is 2.

This is close to the calculated amount, so the answer is reasonable.

### 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 =  $0.03 \times 1200$

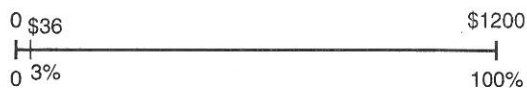
Ignore the decimal point and multiply as whole numbers.

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

So,  $0.03 \times \$1200 = \$36.00$

Sandi earned \$36.00 last Saturday.

Show this on a number line.



### Another Strategy

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

Estimate to place the decimal point.

\$1200 is about \$1000.

1% of \$1000 is \$10.

So, 3% of \$1000 is:  $\$10 \times 3 = \$30$

## Practice

- Calculate.
  - 10% of 30
  - 20% of 50
  - 18% of 36
  - 67% of 112
- The regular price of a radio is \$60.00. Find the sale price before taxes when the radio is on sale for:
  - 25% off
  - 30% off
  - 40% off



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%.~~ *Sales tax is 7%*  
 For each item below:
- i) Find the ~~GST~~ *TAX*
- ii) Find the cost of the item including ~~GST~~ *TAX*.
- 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.

7. **Assessment Focus** A clothing store runs this advertisement in a local paper.

"Our entire stock up to 60% off"

- a) What does "up to 60% off" mean?  
 b) Which items in the advertisement have been reduced by 60%?  
 c) Suppose all items are reduced by 60%. Explain the changes you would make to the sale prices.

Item	Regular Price	Sale Price
Sweaters	\$49.99	\$34.99
Ski Jackets	\$149.99	\$112.49
Scarves	\$29.99	\$12.00
Leather Gloves	\$69.99	\$38.49
Hats	\$24.99	\$10.00

8. **Take It Further** Marissa and Jarod plan to purchase DVD players with a regular price of \$199.99. The DVD players are on sale for 25% off. Marissa starts by calculating 25% of \$199.99. Jarod calculates 75% of \$199.99.
- a) Show how Marissa uses her calculation to find the sale price.  
 b) How does Jarod find the sale price? Show his work.  
 c) Do both methods result in the same sale price? Explain.



### Reflect

How does a good understanding of percents help you outside the classroom? Give an example.