

1.8 Items on Sale

Focus: determining discounts and percents

Warm Up

1. When calculating tax on an item, your calculator reads the following amounts. Round each amount to 2 decimal places.

a) 3.2205 _____

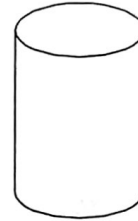
b) 2.1357 _____

c) 99.4174 _____

d) 225.9887 _____

2. You drink $\frac{1}{4}$ of a can of juice.

Shade the amount of juice that is left in the can.



3. Find 10% of each amount.

a) \$25.00 _____

b) \$68.00 _____

c) \$52.60 _____

4. Round each amount to the nearest dollar.

a) \$12.59 _____

b) \$65.23 _____

c) \$22.67 _____

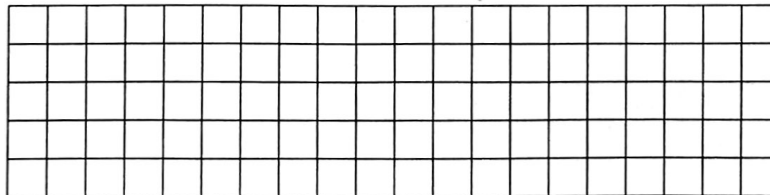
Calculating Discounts

- In a clothing store, you see a sign that reads 25% off.



1. A **discount** is an amount subtracted from the original price of an item. In this example, the discount is 25%.

a) Shade in 25% of this grid of 100 squares.



b) What is 25% as a fraction? _____
How could you write the discount as a fraction?

What is a
discount?

How do you find the **sale price** of an item?

2. The **sale price** of an item is the original price – discount.

- a) If a coat costs \$100, how much is the discount?

$$25\% \text{ of } \$100 = \underline{\hspace{2cm}}$$

- b) Calculate the sale price of the coat.

$$\text{Sale Price} = \text{Original Price} - \text{Discount}$$

$$= \$100 - \underline{\hspace{2cm}}$$

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

- You have \$20 cash with you.
- Can you afford the shirt?

3. The original price of the shirt is \$25.99. Calculate the sale price.

- a) Calculate the amount of the discount.

$$\text{Discount} = 25\% \text{ of } \$25.99$$

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

- b) Calculate the sale price of the shirt.

$$\text{Sale Price} = \text{Original Price} - \text{Discount}$$

$$= \$25.99 - \underline{\hspace{2cm}}$$

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

- c) Calculate the HST.

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

- d) Calculate the total cost of the shirt including tax.

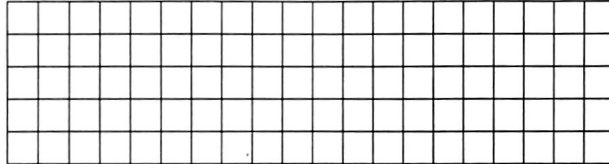
- e) Can you afford the shirt?

YES NO

4. Another shirt has an original price of \$24.00. It is labelled 20% off.

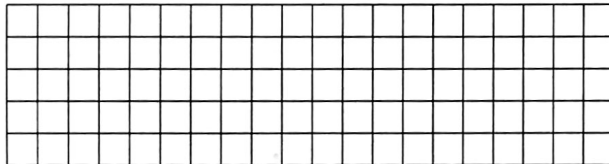


- a) Shade 20% of the grid.



- b) What percent is unshaded? _____

Shade this percent of the grid below.



- This represents the sale price of the shirt.

- c) Calculate 80% of \$24.00.

- d) Calculate the HST.

- e) What is the total price of the shirt?

- f) Can you afford this shirt with your \$20.00?

YES NO

5. Choose 6 items from a flyer. Practise your skills in calculating discounts by completing the table.

| Item | Original Price | Percent of Discount | Percent That Gives the Sale Price | Sale Price |
|------|----------------|---------------------|-----------------------------------|------------|
| a) | | 40% | | |
| b) | | 50% | | |
| c) | | 25% | | |
| d) | | 10% | | |
| e) | | 15% | | |
| f) | | 20% | | |

Reading Discounts as Fractions

- While walking through the mall you notice a store with this sign in the window:

| |
|---|
| <p>BOGO Buy One Get One $\frac{1}{2}$ off</p> |
|---|

6. Estimate each sale price at $\frac{1}{2}$ off.

| Item | Original Price | Price Rounded to Nearest Dollar | Estimated Sale Price |
|------------------|----------------|---------------------------------|----------------------|
| a) Running shoes | \$59.99 | | |
| b) Sweater | \$27.49 | | |

7. How could you estimate the sale price of items that are $\frac{1}{4}$ off?
- _____

8. Estimate each sale price at $\frac{1}{4}$ off.

| Item | Original Price | Price Rounded to Nearest Dollar | Estimated Sale Price |
|-----------------|----------------|---------------------------------|----------------------|
| a) CD | \$19.99 | | |
| b) Fleece shirt | \$23.99 | | |

9. In another store, items on one table are on sale for $\frac{1}{4}$ off.

a) A sweatshirt is regularly priced at \$28.00. What is the amount of the discount? How did you get your answer?

b) What is the sale price of the sweatshirt?

10. Determine the discount and sale price of each of these items at $\frac{1}{4}$ off.

| Item | Price | Discount | Sale Price |
|--------------------|---------|----------|------------|
| a) Shirt | \$19.97 | | |
| b) Jacket | \$99.97 | | |
| b) Pants | \$42.00 | | |
| d) Socks (2 pairs) | \$4.60 | | |
| e) Sweater | \$39.99 | | |

✓ Check Your Understanding

How could you estimate each of these discounts without using a calculator?

a) 30% _____

b) 25% _____