

2-6 Sales Tax, Tips, and Markups

Find the total cost to the nearest cent.

1. \$58 bill; 20% tip

SOLUTION:

Method 1: Add the tip to the regular price.

Find the tip.

$$\begin{aligned} 20\% \text{ of } \$58 &= 0.2 \times 58 \\ &= 11.6 \end{aligned}$$

Add the tip to the regular price.

$$\$58 + \$11.60 = \$69.60$$

Method 2: Add the percent of the tip to 100%.

$$100\% + 20\% = 120\%$$

The total cost is 120% of the bill.

$$\begin{aligned} 120\% \text{ of } \$58 &= 1.2 \times 58 \\ &= 69.6 \end{aligned}$$

The total cost of the bill with tip is \$69.60.

ANSWER:

\$69.60

3. \$1,500 computer; 7% tax

SOLUTION:

Method 1: Add sales tax to the regular price.

Find the sales tax.

$$\begin{aligned} 7\% \text{ of } \$1,500 &= 0.07 \times 1,500 \\ &= 105 \end{aligned}$$

Add the sales tax to the regular price.

$$\$1,500 + \$105 = \$1,605$$

Method 2: Add the percent of tax to 100%.

$$100\% + 7\% = 107\%$$

The total cost is 107% of the bill.

$$\begin{aligned} 107\% \text{ of } \$1,500 &= 1.07 \times 1,500 \\ &= 1,605 \end{aligned}$$

The total cost of the computer with sales tax is \$1,605.

ANSWER:

\$1,605

5. **Financial Literacy** A restaurant bill comes to \$28.35. Find the total cost if the tax is 6.25% and a 20% tip is left on the amount before tax.

SOLUTION:

Sales tax is 6.25% and the tip is 20%, so together they will be 26.25%.

$$\begin{aligned} 26.25\% \text{ of } \$28.35 &= 0.2625 \times 28.35 \\ &\approx 7.4419 \end{aligned}$$

Add the tax and tip to the amount of the bill.

$$\$28.35 + \$7.44 = \$35.79$$

So, the total restaurant bill is \$35.79.

ANSWER:

\$35.79

7. Find the selling price of a \$270 bicycle with a 24% markup.

SOLUTION:

Find the markup. Let m represent the markup.

part = percent \times whole

$$m = 0.24 \times 270$$

$$m = 64.80$$

Add the markup to the selling price.

$$\$64.80 + \$270 = \$334.80$$

The price of the bike after the markup is \$334.80.

ANSWER:

\$334.80

9. What is the sales tax on a chair with a price tag of \$178.90, if the tax rate is 5.75%?

SOLUTION:

$$\begin{aligned} 5.75\% \text{ of } \$178.90 &= 0.0575 \times 178.9 \\ &\approx 10.2868 \end{aligned}$$

The sales tax is \$10.29.

ANSWER:

\$10.29

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11. **Persevere with Problems** The Leather Depot buys a coat from a supplier for \$90 wholesale and marks up the price by 40%. If the retail price is \$134.82, what is the sales tax?

SOLUTION:

Markup is 40%.

Find the markup.

$$\begin{aligned} 40\% \text{ of } \$90 &= 0.4 \times 90 \\ &= 36 \end{aligned}$$

Add the markup to the regular price.

$$\$90 + \$36 = \$126$$

The cost with sales tax is \$134.82. Find the sales tax. Let t represent the sales tax.

Subtract to find the amount of the sales tax.

$$134.82 - 126 = \$8.82.$$

Since $\$126 \times t = 8.82$, $t = \frac{8.82}{126}$ or 0.07.

So, the sales tax is 0.07 or 7%.

ANSWER:

7%

25. An office supply store marks up their prices by 30%. Which of the following could be items sold by the store? Select all that apply.

- office chair: cost: \$72, selling price: \$94.50
- printer paper: cost: \$4.60, selling price: \$5.98
- box of paper clips: cost: \$1.20, selling price: \$1.65
- file cabinet: cost: \$60, selling price: \$78

SOLUTION:

Find 30% of the cost, then add it to the cost to see if it the selling price.

Office Chair

Find the mark up.

$$\begin{aligned} 30\% \text{ of } \$72 &= 0.3 \times 72 \\ &= 21.6 \end{aligned}$$

Add the mark up to the original cost.

$$\$72 + \$21.60 = \$93.60$$

So, this is not sold at this store.

Printer Paper:

Find the mark up.

$$\begin{aligned} 30\% \text{ of } \$4.60 &= 0.3 \times 4.6 \\ &= 1.38 \end{aligned}$$

Add the mark up to the original cost.

$$\$4.60 + \$1.38 = \$5.98$$

So, this is sold at this store.

Box of Paper Clips:

Find the mark up.

$$\begin{aligned} 30\% \text{ of } \$1.20 &= 0.3 \times 1.2 \\ &= 0.36 \end{aligned}$$

Add the mark up to the original cost.

$$\$1.20 + \$0.36 = \$1.56$$

So, this is not sold at this store.

File Cabinet:

Find the mark up.

$$\begin{aligned} 30\% \text{ of } \$60 &= 0.3 \times 60 \\ &= 18 \end{aligned}$$

Add the mark up to the original cost.

$$\$60 + \$18 = \$78$$

So, this is sold at this store.

ANSWER:

- office chair: cost: \$72, selling price: \$94.50
- printer paper: cost: \$4.60, selling price: \$5.98
- box of paper clips: cost: \$1.20, selling price: \$1.65
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Solve.

27. $89 - 31.15$

SOLUTION:

Line up the decimal points. Annex 0s for 89. Then subtract the digits in the same place-value positions. Rename as necessary.

$$\begin{array}{r} 89.00 \\ - 31.15 \\ \hline 57.85 \end{array}$$

ANSWER:

57.85

29. Renata paid \$35.99 for a dress. The dress was on sale for \$14.01 off its regular price. What was the regular price of the dress?

SOLUTION:

To find the regular price of the dress, add the discount to the sale price.

$$\$35.99 + \$14.01 = \$50$$

So, the regular price of the dress was \$50.

ANSWER:

\$50