

## Tax, Tips, Mark-up

DINNER \$20

TIP 22% (0.22)

① WHAT IS 22% OF \$20 = \$4.40

$$\begin{array}{r} 20 \leftarrow 0 \\ \times 0.22 \leftarrow 2 \\ \hline 40 \\ 400 \\ \hline 4.40 \leftarrow 2 \end{array}$$

② How MUCH IS \$20 + \$4.40 = \$24.40  
(DINNER) (TIP)

DINNER \$20

TAX 8% (0.08)

① WHAT IS 8% OF \$20 = \$1.60

$$\begin{array}{r} 20 \leftarrow 0 \\ \times 0.08 \leftarrow 2 \\ \hline 1.60 \leftarrow 2 \end{array}$$

② How MUCH IS \$20 + \$1.60 = \$21.60  
(DINNER) (TAX)

$$\begin{aligned} \text{DINNER} + \text{TAX} + \text{TIP} &= \\ \$20 + \$1.60 + \$4.40 &= \$26 \end{aligned}$$

## DAISY'S SEW SHOP

SEWING MACHINE → HER COST \$100

MARK-UP 40% (0.4)

① WHAT IS 40% OF \$100 = \$40

$$\begin{array}{l} \nearrow \times 4 \\ 10\% \text{ OF } \$100 = \$10 \nearrow \times 4 \end{array}$$

② How MUCH IS DAISY'S COST + DAISY'S PROFIT = \$140 SALE PRICE  
( \$100 ) ( \$40 )

## Tax, Tips, Mark-up

### JONATHAN'S SOCCER SUPPLY

SOCCER BALL  
JSS COST \$12  
MARK-UP 50%  
(PROFIT)



① WHAT IS 50% OF \$12 = \$6  
↑  
 $\frac{1}{2}$  OF 12

② \$12 (JSS COST) + \$6 (JSS PROFIT) = \$18 JSS SALES PRICE

### DAISY'S SEW SHOP

SEWING MACHINE → HER COST \$100  
MARK-UP 40% (0.4)

① WHAT IS 40% OF \$100 = \$40  
x4 (10% OF \$100 = \$10) x4

② HOW MUCH IS DAISY'S COST + DAISY'S PROFIT = \$140 SALE PRICE  
( \$100 ) ( \$40 )

## Lesson 2-6 Sales Tax, Tips, and Markup

**Sales Tax** is a percent of the purchase price and is an amount paid in addition to the purchase price.  
**Tip**, or **gratuity**, is a small amount of money in return for service. The amount a store increases the price of an item by is called the **markup**.

### Example 1

**SOCCER** Find the total cost of a \$17.75 soccer ball if the sales tax is 6%.

#### Method 1

First, find the sales tax.

$$6\% \text{ of } \$17.75 = 0.06 \cdot 17.75 \\ \approx 1.07$$

The sales tax is \$1.07.

Next, add the sales tax to the regular price.

$$1.07 + 17.75 = 18.82$$

The total cost of the soccer ball is \$18.82.

#### Method 2

$$100\% + 6\% = 106\% \quad \text{Add the percent of tax to 100\%.}$$

The total cost is 106% of the regular price.

$$106\% \text{ of } \$17.75 = 1.06 \cdot 17.75 \\ \approx 18.82$$

### Example 2

**MEAL** A customer wants to leave a 15% tip on a bill for \$18.50 at a restaurant.

#### Method 1 Add tip to regular price.

First, find the tip.

$$15\% \text{ of } \$18.50 = 0.15 \cdot 18.50 \\ = 2.78$$

Next, add the tip to the bill total.

$$\$18.50 + \$2.78 = \$21.28$$

The total cost of the bill is \$21.28.

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

$$100\% + 15\% = 115\% \quad \text{Add the percent of tip to 100\%.}$$

The total cost is 115% of the bill.

$$115\% \text{ of } \$18.50 = 1.15 \cdot 18.50 \\ = 21.28$$

### Exercises

Find the total cost to the nearest cent.

- \$22.95 shirt, 6% tax  
 ① WHAT IS 6% OF \$22.95 = \$1.38  
 ② HOW MUCH IS \$22.95 + TAX = \$24.33 TOTAL \$1.38
- \$24 lunch, 15% tip
- \$10.85 book, 4% tax  
 ① WHAT IS 4% OF \$10.85 = \$0.43  
 ② HOW MUCH IS \$10.85 + TAX = \$11.28 TOTAL \$0.43
- \$97.55 business breakfast, 18% tip
- \$59.99 DVD box set, 6.5% tax
- \$37.65 dinner, 15% tip

SHIRT TAX 6%  
 $\$22.95 (1.06) = \$24.33$   
 SHIRT TAX

4% = 0.04

## Lesson 6 Skills Practice

### Sales Tax, Tips, and Markup

Find the total cost to the nearest cent.

1. \$49.95 CD player; 5% tax

2. \$69 shoes; 6% tax

3. \$37 dinner; 15% tip

4. \$2.99 socks; 5.5% markup

9. \$16 haircut; 15% tip

10. \$8.75 breakfast; 15% tip

11. \$47 tie; 4.5% markup

12. \$40.80 dinner; 17% tip

13. \$52 lunch; 20% tip

14. \$18.99 CD; 6% markup

15. \$22 haircut; 20% tip

16. \$128 catered dinners; 18% tip