

Business 6th

Grade

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Chapter 1

Dollars and Sense

- 1.1 Types of Warranties
- 1.2 Unit Prices
- 1.3 The Sales Receipt
- 1.4 Retail Prices
- 1.5 Discounts
- 1.6 Sales Tax
- 1.7 At-Home Shopping



Chapter Projects

Under Warranty

At home, gather warranty cards or pamphlets for household products. Bring these to school. If you do not have the warranty information for a certain product, you may be able to find it at the manufacturer's website.

Get in small groups of three or four with other students that brought in warranties for similar products. Compare the warranty information. Make a chart that shows each product's manufacturer and warranty with the similarities and differences.

Research other manufacturers of similar products online to see if a better warranty is available from a manufacturer not represented in the group. From what you find online and the information you brought from home, determine the best warranty. Write a summary about the product with the best warranty and explain your reasons.

For more information on warranties, contact the Federal Trade Commission, either by mail, email, or their website.

Clipping Coupons

In pairs, search the newspaper or Internet to gather 20 coupons for products available in most supermarkets. Try to select only coupons for national brands. Cut the coupons and arrange them in a column along the left side of a poster board. Make a table on the poster board so that each coupon is in a row. Make other columns for "Price at Store A", "Price with coupon at Store A", "Price at Store B", and "Price with coupon at Store B".

Visit two supermarkets and record the prices of the 20 items for which you have coupons.

Use the data you collected to complete your table. Find the total of each column. Compare the cost of buying these items at regular prices and with coupons at both stores.

1.1

Types of Warranties

◆ *Objective: Find the expiration date of warranties.*

Industry today has the technology to create everything from lipsticks to lasers. Some products are designed to last longer than others. You should not expect goods to last forever, but you do have a right to expect them to last a reasonable amount of time.

For this reason, products that are known as *durable goods* are sold with a warranty. A **warranty** is a guarantee of a product's performance. You should become familiar with the following types of warranties.

An **implied warranty** is an unwritten guarantee that a product will do what it is supposed to do. *Every* product carries this type of warranty. For example, a light bulb must provide light; a pencil must write.

An **express warranty** is a written guarantee covering specific conditions. It lists the specific parts that are guaranteed, the length of the warranty, and procedures for labor, shipping, and repairs. These warranties are dated and expire after a certain period of time.

On certain items, you can purchase **extended warranties** that lengthen the life of the original warranty.

Skills and Strategies

EXAMPLE Sandra's new electronic keyboard carries a 60-day full warranty and a 1-year warranty for parts. She purchased the keyboard on April 17. On what day will the 60-day full warranty expire?

SOLUTION

Subtract the date of purchase from the number of days in the purchase month.

$$\begin{array}{r} 30 \text{ days in April} \\ - 17 \text{ date of purchase} \\ \hline 13 \text{ number of days in April covered} \end{array}$$

Add that amount to the number of days in the next months until the length of the warranty is close to being reached.

$$\begin{array}{r} 13 \text{ April days covered} \\ + 31 \text{ number of days in May} \\ \hline 44 \text{ warranty not reached, but close} \end{array}$$

Subtract the number of days covered from the length of the warranty.

$$\begin{array}{r} 60 \text{ length of the warranty} \\ - 44 \text{ number of days covered} \\ \hline 16 \text{ number of days in June covered} \end{array}$$

The full warranty expires on June 16.

Practice Exercises

List the number of days of each month.

- | | | | | | |
|-------------|-------|--------------|-------|--------------|-------|
| 1. January | _____ | 2. February | _____ | 3. March | _____ |
| 4. April | _____ | 5. May | _____ | 6. June | _____ |
| 7. July | _____ | 8. August | _____ | 9. September | _____ |
| 10. October | _____ | 11. November | _____ | 12. December | _____ |

Simplify.

- | | | | | | |
|---------------|-------|---------------|-------|----------------|-------|
| 13. $31 - 16$ | _____ | 14. $15 + 28$ | _____ | 15. $120 - 53$ | _____ |
| 16. $30 - 13$ | _____ | 17. $90 - 61$ | _____ | 18. $24 + 29$ | _____ |

Application Exercises

19. Complete the table.

Item	Purchase Date	Length of Warranty	Warranty Expiration Date
<i>ceiling fan</i>	<i>June 3</i>	<i>90 days</i>	a.
<i>car alarm</i>	<i>April 28</i>	<i>60 days</i>	b.
<i>gas barbecue</i>	<i>July 4</i>	<i>30 days</i>	c.
<i>television</i>	<i>August 3</i>	<i>90 days</i>	d.

20. Akira bought a used car on July 30. It came with a 1-year warranty. On May 27 of the following year, Akira noticed that her car's air conditioning was not working. Had the warranty expired by May 27?
21. A local department store offers a 60-day full warranty on all goods in addition to the manufacturer's warranty. Stan bought a microwave oven on June 8. When does the department store's warranty expire?
22. The Squeaky-Klean Dishwasher Company gives limited warranties for 60 days on all of its dishwashers. Nina bought a dishwasher on June 26. It stopped working on August 18. Was the product covered under warranty?
23. On December 1, Ruth bought a food processor. If after 30 days, she isn't completely satisfied, she can return the product to the place she purchased it for a full refund. By what date must she return the food processor for a full refund?
24. Janine has 94 days left on the warranty on her electric guitar. It is September 23. When does her warranty expire?
25. The 90-day warranty on Rose's telephone expires on November 9. On what date did Rose purchase the telephone?

1.2

Unit Prices

◆ *Objective: Find and compute with unit prices and total prices.*

Products that are used or consumed and cannot be reused are either perishable goods or non-perishable goods. **Perishable goods** have a limited shelf life. Examples of such goods are milk, eggs, bread, and cheese.

For comparison, it is important to know the unit price of an item. The **unit price** is the price of one unit (pound, ounce, gram) of the product. By knowing the unit price, you can decide which product is the better buy.

When comparing items manufactured by the same company but sold in different sizes, the lower unit price is the better bargain. For similar products manufactured by different companies, the lower unit price is the less expensive product.

Skills and Strategies

EXAMPLE 1 Emma is buying a 16.5-pound watermelon. The price of the melon is \$0.32 per pound. What is the total cost of a watermelon?

SOLUTION

Multiply the unit price by the number of units purchased.

$$\begin{array}{r} \$0.32 \quad \text{unit price} \\ \times 16.5 \quad \text{pounds} \\ \hline \$5.28 \quad \text{price of the watermelon} \end{array}$$

The price for the watermelon is \$5.28.

EXAMPLE 2 A 20-ounce box of cereal sells for \$4.20. The label on the shelf lists the unit price. What price per ounce should be on the label?

SOLUTION

Divide the cost by the number of units in the package.

$$\begin{array}{r} \$0.21 \quad \text{unit price} \\ 20 \overline{) \$4.20} \quad \text{number of units} \overline{) \text{total cost}} \end{array}$$

The unit price of the cereal is \$0.21 per ounce.

Practice Exercises

Multiply.

1. $\$5.45 \times 4$ _____ 2. $\$3.82 \times 7$ _____ 3. $\$0.89 \times 15$ _____

Divide.

4. $\$10.52 \div 4$ _____ 5. $\$9.72 \div 18$ _____ 6. $\$10.02 \div 6$ _____

Application Exercises

7. Complete the table.

Item	Unit Price	Quantity	Total Price
vinegar	\$0.15 per fluid ounce	a.	\$3.90
cheese	\$1.89 per pound	4.5 lb	b.
ribbon	\$1.90 per foot	c.	\$17.10
broccoli	\$0.99 per pound	d.	\$2.97
peaches	\$0.69 per pound	2.7 lb	e.
turkey	\$5.99 per pound	$\frac{1}{2}$ lb	f.
rice	\$0.18 per ounce	24 oz	g.

8. A bag of potatoes weighs 15 pounds. At \$0.59 per pound, what is the price for the bag of potatoes?
9. A 50-foot piece of chain link sells for \$17. What is the unit price?
10. Bill picked up a bag of apples marked 9 pounds for \$5.85. He weighed the apples on the customer scale, which read 7.2 pounds. If the scale is correct, how many pounds off is the label and what should the total price be?
11. Mary reads the label on a package of boneless chicken breasts. The chicken weighs 4.1 pounds and costs \$2.99 per pound. The price on the label is \$15.26. Is the price on the label correct? If not, what should the price on the label be?
12. Kieran is changing the oil in his car. He needs five quarts of oil. The 5-quart container costs \$8.99. Individual 1-quart containers cost \$1.85. Which should he buy if he wants the better buy?
13. Adriana is comparing the price of fruit salad at two deli stores. Lubbock's sells a 3-ounce container for \$4.05, and Austin's sells a 9-ounce container for \$12.15. Which store has the lower unit price?
14. At a gas station, you can buy a 40-fluid ounce bottle of windshield wiper fluid for \$1.20. At an auto parts store, a 32-fluid ounce container sells for \$1.00.
- What is the unit price per fluid ounce at the gas station? _____
 - What is the unit price per fluid ounce at the auto parts store? _____
 - Which store offers the better buy? _____

1.3

The Sales Receipt

◆ *Objective: Compute the subtotal and apply rebates to a group of items.*

A **sales receipt** is a paper record of a purchase that should be issued to a customer with every purchase. As a consumer, you should inspect a sales receipt to check that each item's price is correct and that you were charged for the correct number of each item purchased.

You should also check the subtotal on the receipt. The **subtotal** is the sum of the purchases. The subtotal does not include any taxes.

You should save your sales receipts as proof of purchase for warranty purposes, or in the event you need to exchange or return an item. A copy of the sales receipt is also required if you have a rebate to claim from a manufacturer. A **rebate** is a refund in a specific amount that is given to the buyer. A rebate, which is supposed to be an incentive to purchase an item, can be mailed to the customer or given at the time of purchase.

Skills and Strategies

EXAMPLE Michelle bought two gallons of antifreeze that cost \$7.99 each. She received a rebate coupon good for \$1.50 off each gallon purchased. What is the cost of Michelle's antifreeze purchase after the rebate?

SOLUTION

Find the original cost of two gallons.

\$7.99	<i>price of one gallon</i>
$\times \quad 2$	<i>number of gallons purchased</i>
\$15.98	<i>original cost of two gallons</i>

Find the total rebate.

\$1.50	<i>amount of one rebate</i>
$\times \quad 2$	<i>number of rebates</i>
\$3.00	<i>rebate on two gallons</i>

To find the total cost, subtract the total rebate from the original cost.

\$15.98	<i>original cost of two gallons</i>
$- \quad 3.00$	<i>total rebate</i>
\$12.98	<i>total cost</i>

The total cost of Michelle's supplies was \$12.98.

Practice Exercises

Add.

- | | |
|-------------------------------|-------------------------|
| 1. $69.38 + 1.12 + 6.3$ _____ | 2. $15.38 + 1.15$ _____ |
| 3. $18.8 + 15.13$ _____ | 4. $6 + 7.25$ _____ |

Subtract.

5. $15.19 - 6.13$ _____ 6. $213.1 - 4.2$ _____
 7. $163.004 - 4.1$ _____ 8. $17.9 - 6.12$ _____

Multiply.

9. 69.13×4.1 _____ 10. 12.1×6 _____
 11. 12.1×0.06 _____ 12. 16.2×8.9 _____

Application Exercises

13. Lindsay bought eight SuperCell batteries for her CD player. The batteries are sold in two-packs for \$2.95. She received a rebate form for \$0.50 off each package. What was the final cost of the batteries?
14. Mr. Fernandez ordered four large pizzas for his volleyball team. Each pizza cost \$16.95. He had a coupon that allowed him to take \$3.25 off two of the pizzas. How much did the four pizzas cost?
15. Nancy is buying equipment for the Jamestown girls' softball team. She purchases a dozen balls and three bats. The balls are \$4.75 each and the bats are \$39.50 each. Find the total cost of these items.
16. Phil is buying one gross of guitar picks (1 gross = 144 units). The picks cost \$0.13 each. The cashier writes out a sales receipt with a subtotal of \$19.72. Is this subtotal correct? If not, what is the correct subtotal?
17. Find the missing amounts on the invoice.

GRUDMAN'S POOL SERVICE			
Quantity	Description	Unit Price	Amount
3 gallons	algaecide	\$27.50 per gallon	a.
20 tablets	chlorine tablets	\$1.15 per tablet	b.
2 covers	solar covers	\$180.00 per cover	c.
Subtotal			d.

18. The manager for Martino's Pizza is reviewing the order of ingredients for next week. He notices a mistake on the order form. Find the mistake and correct the order form.

ART'S PIZZA SUPPLIES			
Quantity	Ingredients	Unit Price	Amount
3 cans	tomato sauce	\$9.00 per can	\$27.00
120 lb	flour	\$0.90 per pound	\$180.00
60 lb	pizza cheese	\$3.50 per pound	\$210.00
Subtotal			\$417.00



Retail Prices

◆ *Objective: Compute the retail price of an item after markup.*

Manufacturers produce products that are sold to vendors. The vendors then sell those products to customers. Based on the materials used and labor necessary to produce the product, the manufacturer establishes the **wholesale price**, which is the price that a vendor pays to the manufacturer for the product. In order to make a profit, the vendor (usually a store) charges the consumer **retail price**, which is more than the wholesale price. The **markup** amount is the difference between the retail price and wholesale price. The markup rate is a percentage of the wholesale price.

Skills and Strategies

EXAMPLE The Sew-Nice Corporation sells sewing machines to stores at a wholesale price of \$410 each. Tenser Department Store uses a 40% markup. What is the retail price of a Sew-Nice sewing machine at Tenser Department Store?

SOLUTION

Multiply the wholesale price by	\$410.00	<i>wholesale price</i>
the markup rate expressed as a	<u>x 0.40</u>	<i>markup rate as a decimal</i>
decimal. Then round, if necessary.	\$164.00	<i>amount of markup</i>

To find retail price, add	\$410.00	<i>wholesale price</i>
the markup amount to	<u>+ 164.00</u>	<i>amount of markup</i>
the wholesale price.	\$574.00	<i>retail price</i>

The retail price of the sewing machine at Tenser is \$574.00.

◆ Alternative Strategy

Multiply the wholesale price by the	\$410.00	<i>wholesale price</i>
percent customers pay, which is	<u>x 1.4</u>	<i>100% + 40% = 140%</i>
100% + markup rate. Then round.	\$574.00	<i>retail price</i>

Practice Exercises

Write the markup rate as a decimal.

1. 35% _____ 2. 112% _____ 3. 20% _____ 4. 8% _____

Round to the nearest cent.

5. \$129.843 _____ 6. \$1,203.0981 _____ 7. \$564.9455 _____

Find each amount to the nearest cent.

8. 10% of \$816 _____ 9. 18% of \$7,512 _____ 10. 7% of \$1,098 _____

Application Exercises

11. Complete the table.

Item	Wholesale Price	Markup Amount	Retail Price
table saw	\$280.50	\$150.00	a.
clamp	\$22.80	\$22.80	b.
miter box	\$10.00	\$11.00	c.
hammer	\$25.00	\$18.50	d.
belt sander	\$48.25	\$33.00	e.

12. Complete the table. Round answers to the nearest cent.

Item	Wholesale Price	Markup Percentage	Markup Amount	Retail Price
watch	\$85.90	75%	a.	b.
clock	\$120.00	93%	c.	d.
television	\$290.90	100%	e.	f.
phone	\$36.50	105%	g.	h.
bicycle	\$143.50	120%	i.	j.

13. The retail price of a car stereo is \$265 and the markup rate is 68%. What is the wholesale price of the car stereo to the nearest dollar?
14. Emily purchased a CD at Music-B-U's. She was charged \$14.40. Music-B-U's pays their supplier a wholesale price of \$18 for the CD. The store's markup percentage is 20%. What did the cashier do incorrectly?
15. Sparky's Pet Shop purchases border collies from a breeder for \$300 each. The pet shop retails the dogs for \$650.00. What is the markup amount on each dog?
16. A digital camera is sold to a customer with a 34% markup on the wholesale price. If the wholesale price of the camera is \$189.25, how much is the retail price?
17. Julie's Prop Shop sells wigs to costume stores at a wholesale price of \$16.00 each. The stores mark the wigs up 90%. What is the retail price of a wig?
18. City Tires sells all its tires at a markup rate of 85%. The wholesale price of one X15 snow tire is \$62.00. What is the retail price that Juan pays for four X15 snow tires?