

3.5

Multiplying Decimals by Whole Numbers

• Example 1

Steve purchased a television set for \$299.50. He agreed to pay for the set by making payments of \$27.70 for 12 months. How much extra did he pay on the installment plan?

Solution First we multiply to find the amount Steve actually paid.

$$\begin{array}{r} 27.70 \\ \times 12 \\ \hline 5540 \\ 2770 \\ \hline 332.40 \end{array} \quad \text{Amount paid}$$

Now subtract the listed price. The difference will give the extra amount Steve paid.

$$\begin{array}{r} 332.40 \\ -299.50 \\ \hline 32.90 \end{array} \quad \text{Extra amount}$$

Steve will pay an additional \$32.90 on the installment plan.

● ● ● CHECK YOURSELF 1

Sandy's new car had a list price of \$7385. She paid \$1500 down and will pay \$205.35 per month for 36 months on the balance. How much extra will she pay with this loan arrangement?

● ● ● CHECK YOURSELF ANSWER

1. \$1507.60.

3.5 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Multiply.

1.
$$\begin{array}{r} 2.56 \\ \times 72 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 56.7 \\ \times 35 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 0.372 \\ \times 58 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 7.3 \\ \times 8 \\ \hline \end{array}$$

5. 3.52×58

6. 0.054×100

Solve the following applications.

7. **Total cost.** Kurt bought four shirts on sale for \$9.98 each. What was the total cost of the purchase?
8. **Total payments.** Juan makes monthly payments of \$123.65 on his car. What will he pay in 1 year?
9. **Area.** A sheet of typing paper has dimensions of 21.6 by 28 centimeters. What is its area?
10. **Car rental.** A rental car costs \$24 per day plus 18 cents per mile. If you rent a car for 5 days and drive 785 mi, what will the total car rental bill be?

11. **Car payment.** Maureen's car payment is \$242.38 per month for 4 years. How much will she pay altogether?
12. **Cost of pens.** Alan bought 12 pens on sale at \$1.49 each. How much did he pay for the 12 pens?
13. **Mileage expenses.** A salesperson is allowed 22 cents per mile by her company as a business expense. If she drove 425 mi during a week, how much should she claim for mileage expense for that week?
14. **Rental car.** The cost of a rental car is \$28.95 per day plus 27 cents per mile. What will it cost you to rent a car for a single day if you drive 140 mi?
15. **Interest.** John purchases a television set and agrees to make monthly payments of \$39.60 for 12 months. If the list price of the set was \$395.50, how much extra is John paying on this installment plan?
16. **Taxes.** To find the amount deducted from your paycheck for Social Security, multiply your salary by 0.076. If your weekly pay is \$507, what amount (to the nearest cent) will be deducted for Social Security?
17. **Amount paid.** A washer-dryer combination has an advertised price of \$535.90. You buy the set and agree to make payments of \$20.50 for 36 months. How much extra are you paying for this installment plan?
18. **Cost of items.** A store buys 1000 items costing \$0.47 per item. What is the total cost of the order?

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____