

Adding and Subtracting Decimals

- 1. MICE The average length of the head and body of a western harvest mouse is 2.9 inches. The average length of the tail is 2.8 inches. First, estimate the total length of the mouse. Then find the actual total length.
- 2. MUSIC A piano solo on a CD is 5.33 minutes long. A guitar solo is 9.67 minutes long. How much longer is the guitar solo than the piano solo? First estimate the difference. Then find the actual difference.

- 3. WHALES The average length of a humpback whale is 13.7 meters. The average length of a killer whale is 6.85 meters. How much longer is the humpback whale than the killer whale?
- **4. GARDENING** Alan is connecting three garden hoses to make one longer hose. The green hose is 6.25 feet long, the orange hose is 5.755 feet long, and the black hose is 6.5 feet long. First, estimate the total length. Then find the actual total length.

- 5. ASTRONOMY Distance in space can be measured in astronomical units, or AU. Jupiter is 5.2 AU from the Sun. Pluto is 39.223 AU from the Sun. How much closer to the Sun is Jupiter than Pluto?
- **6. ALGEBRA** It is x miles from James City to Huntley and y miles from Huntley to Grover. How many miles is it from James City to Grover? To find out, evaluate x + y if x = 4.23 and y = 16.876.



Multiplying Decimals by Whole Numbers

- 1. **COOKING** Norberto uses three 14.7 oz cans of chicken broth when he makes his delicious tortilla soup. How many total ounces of chicken broth does he use?
- 2. TIME Amanda works on a farm out in the hills. It takes her 2.25 hours to drive to town and back. She usually goes to town twice a week to get supplies. How much time does Amanda spend driving if she takes 8 trips to town each month?
- **3. EXERCISE** The local health club is advertising a special for new members: no initiation fee to join and only \$34.50 per month for the first year. If Andy joins the health club for one year, how much will he spend on membership?
- **4. BIKING** In order to train for a cross-state biking trip, Julie rides her bike 34.75 miles five times a week. How many total miles does she ride each week?

- **5. MONEY** David wants to buy 16 bolts from a bin at the hardware store. Each bolt costs \$0.03. How much will David pay for the bolts?
- **6. INSECTS** One wing of a Royal Moth is 0.75 inch across. How wide is the moth's wingspan when both wings are open?

- 7. COSTUMES KJ is making costumes for this year's samba parade. The pattern she is using calls for 2.125 yards of fabric for each costume. How many yards of fabric will she need to make 34 costumes?
- **8. POOL PASSES** The girl scouts are going to the pool. It will cost them \$2.50 per person to go and there are 10 people going. What will the total cost be?



Multiplying Decimals

- 1. GIFTS Colin is filling 4.5 ounce bottles with lavender bubble bath that he made for gifts. He was able to fill 7.5 bottles. How many ounces of bubble bath did he make?
- **2. GROCERY** Iona's favorite peaches are \$2.50 per pound at the local farmers' market. She bought 3.5 pounds of the peaches. How much did she spend?

- 3. SHOPPING Jennifer is buying new school clothes. The items she wants to buy add up to \$132.50 before sales tax. Sales tax is calculated by multiplying the total amount by 0.08. What is the amount of sales tax for the items?
- 4. DRIVING Ana bought a van that holds 20.75 gallons of gas and gets an average of 15.5 miles per gallon. How many miles can she expect to go on a full tank?

- 5. INCOME Ishi makes \$8.50 an hour rolling sushi at Kyoto Japanese Restaurant. His paycheck shows that he worked 20.88 hours over the past two weeks. How much did Ishi make before taxes?
- 6. TRAVEL Manny is on vacation in France. He rented a car to drive 233.3 kilometers from Paris to Brussels and wants to figure out the distance in miles. To convert from kilometers to miles, he needs to multiply the total kilometers by 0.62. How many miles will Manny drive?



Dividing Decimals by Whole Numbers

- 1. ENTERTAINMENT Frank, Gina, Judy, and Connie are splitting their dinner bill. After tip, the total is \$30.08. How much does each owe if they split the bill four ways?
- **2. FOOD** There are 25 servings in a 12.5 ounce bottle of olive oil. How many ounces are in a serving?

- 3. RUNNING Isabella has found that she stays the most fit by running various distances and terrains throughout the week. On Mondays she runs 2.5 miles, on Tuesdays 4.6 miles, on Thursdays 6.75 miles, and on Saturdays 4.8 miles. What is the average distance Isabella runs on each of the days that she runs? Round to the nearest hundredth of a mile.
- 4. BUSINESS Katherine spends \$1,089.72 each month for rent and supplies to run her hair salon. If she charges \$18 for a haircut, how many haircuts must Katherine do to cover her monthly expenses? Round to the nearest whole number.

- 5. CONSTRUCTION It took Steve and his construction crew 8 months to build a house. After expenses, he was left with \$24,872.67 for himself. On average, how much did Steve make per month? Round to the nearest dollar.
- 6. GRADES Shane wants to figure out what grade he is getting in math. His test scores were 85.6, 78.5, 92.5, 67, and 83.7. What was his average test score? What grade will he receive?

Grade	Average Score
A	90 – 100
В	80 - 89
C	70 - 79
D	60 - 69
F	50 - 59