

Expressions Involving Percents

Set up a ratio or proportion and solve to answer the questions.

1. On a model airplane, the scale is 5 centimeters = 2 meters. If the model's wingspan is 28.5 centimeters, what is the actual wingspan?
2. The B-Clean Car Wash washed 128 cars in 3 hours. At that rate, how many cars can they wash in 9 hours?
3. On Monday, a restaurant made \$545 from selling 110 hamburgers. If they sold 53 hamburgers on Tuesday, how much did they make?
4. In 2007, organic farms occupied 2.6 million acres in the United States and produced goods worth about \$1.7 billion. Set up both ratios comparing acres to money and vice versa. Explain the meaning of the ratio.

Use percent of change to solve the following problems.

5. A new DVD costs \$24.99. If the sales tax is 6.85%, what is the total cost?

6. The distance from Phoenix to Tucson is 120 miles. The distance from Phoenix to Flagstaff is about 21.7% longer. To the nearest mile, what is the distance from Phoenix to Flagstaff?

7. A limo costs \$85 to rent for 3 hours plus 7% sales tax. What is the total cost to rent a limo for 6 hours?

8. A new guitar costs \$95.00. Music City is having a clearance sale and the guitars are 15% off. What is the cost of the discounted guitar?

9. The average cost of regular gasoline in North Carolina increased by 73% from 2006 to 2007. If the average cost of a gallon of gas in 2006 was \$2.069, what was the average cost in 2007? Round to the nearest cent.

10. The current price of each share of a technology company is \$135. If this represents a 16.2% increase over the past year, what was the price per share a year ago?