

# % & Proportion & Problem Solving

1. An engineer is trying to build a better automobile tire. For one of her calculations, she has to subtract  $2\frac{2}{3}$  from  $8\frac{2}{5}$ . Which of these is the correct answer to the calculation?

- A  $5\frac{4}{15}$
- B  $5\frac{11}{15}$
- C 6
- D  $6\frac{1}{5}$

2. There are 64 people in a bus, and 36 of them are women. What is the ratio of women to men in the bus?

- A  $\frac{7}{9}$
- B  $\frac{3}{6}$
- C  $\frac{9}{7}$
- D  $\frac{9}{25}$

3. A company earns \$24 of profit for every \$1000 worth of product it sells. How much profit will it make if it sells \$3500 worth of product?

- A \$35
- B \$84
- C \$3524
- D \$720

4. In a fishing contest, the winner caught and released three bass. One was  $8\frac{1}{2}$  pounds, one was  $6\frac{5}{8}$  pounds, and one was 5 pounds. How many pounds of fish did the winner catch and release?

- A  $19\frac{7}{8}$
- B  $19\frac{1}{8}$
- C  $20\frac{1}{8}$
- D  $21\frac{7}{8}$

5. Charles has saved \$480 for a trip to California. Of that amount, he earned \$96 mowing lawns. What percentage of his savings came from mowing lawns?

- A 96%
- B 500%
- C 20%
- D 5%

6. The scale on a map indicates that 2 inches equal 5 miles. If a road is 30 miles long, how long would it be on the map?

- A 30 inches
- B 15 inches
- C 7 inches
- D 12 inches

7. A company spends \$600 on advertising for each \$10,000 of product it sells. If it sells \$40,000 worth of product, about how much did the company spend on advertising?

- A \$10,600
- B \$4,600
- C \$2,400
- D \$60,000

13. A restaurant bill came to \$18.00. You want to leave a 20 percent tip. How much of a tip should you leave?

- A \$2.00
- B \$3.60
- C \$2.18
- D \$3.80

8. What is 250% of 14?

- A 35
- B 29
- C 14.25
- D 25.14

14. How much copper is in 32 pounds of an alloy containing 5% copper

- a. 16 lbs
- b. 1.6 lbs.
- c. 3.2 lbs.
- d. 3 lbs.

9. How much less does one gallon of milk cost at \$2.15 than two half-gallons at \$1.29 each?

- a. 41¢
- b. 14¢
- c. 43¢
- d. 52¢

15. A bike normally costs \$200. How much less would it be if it were reduced by 32%?

- A \$32.00
- B \$168.00
- C \$46.00
- D \$64.00

10. Which statement is incorrect?

- a.  $\frac{2}{5} < \frac{4}{6}$
- b.  $\frac{2}{3} < \frac{5}{9}$
- c.  $\frac{6}{8} = \frac{3}{4}$
- d.  $\frac{4}{9} > \frac{1}{5}$

11. Chris brought home seven quarts of raspberries. She brought home 25% what she picked. How many quarts of raspberries did she pick?

- a. 14 qts.
- b. 56 qts.
- c. 100 qts.
- d. 28 qts.

12. Pythagleo decides to have a small party for the administration at Etna High. He wants to make  $2\frac{1}{2}$  dozen cookies and  $1\frac{1}{2}$  dozen cupcakes. He needs  $\frac{1}{2}$  cup of sugar for each dozen of cookies and 1 cup of sugar for each dozen of cupcakes. How many cups of sugar does he need?