

LESSON PRACTICE

14A

Answer the questions.

1. The original price of the book was \$45.00. Sarah bought it on sale for \$33.75. What percent of the original price did she save?
2. The wholesale price of a shirt is \$15.00 and the retail price is \$25.00. What percent of the wholesale price is the markup or profit?
3. If the wholesale price of the shirt is \$15.00 and the retail price is \$25.00, what percent of the retail price is the profit?
4. The wholesale price of the chair was \$32.00. The retail cost included a markup of 28%. What was the final cost of the chair?
5. The used car sold for \$2,500. The dealer made a profit of 15% of the original cost. What was the original cost? (Round to the nearest dollar.)
6. In March, winter coats were advertised for 55% off the marked price. What would Naomi pay for a coat that was marked \$195.00?

7. The state sales tax is 6%. Grace paid a total of \$32.45 at the check-out. What was the amount of her purchase before taxes? (Round to the nearest cent.)
8. The price of the food at the restaurant came to \$45.50. If the tax was 5.4% of that amount and the tip was 15%, what was the total amount spent? (Round to the nearest cent.)

For #9–12, use the atomic weight table in the instruction manual or on the symbols and tables page at the back of this book. Round to the nearest whole percent.

9. Find the percentage of silicon in SiO_2 .

10. Find the percentage of oxygen in SiO_2 .

11. Find the percentage of iron in Fe_2O_3 .

12. Find the percentage of oxygen in Fe_2O_3 .

SYSTEMATIC REVIEW

14E

For #1–3: At the clearance sale, David observed that every item in the store was being discounted 60%.

1. How much is the \$149.95 power saw after the discount?
2. How much is the \$399.00 lawn mower after the discount?
3. How much is the \$21.90 rake after the discount?

For #4–6: The bill for the food at the diner was \$54.45.

4. What is the tax if the rate is 7.25%?
5. How much would a 16% tip cost?
6. What percent of the final money spent for the evening is the tax and tip combined?

For #7–8, use the atomic weight table in the instruction manual or at the back of this book.

7. Find the percentage of carbon in CH_4 .
8. Find the percentage of hydrogen in CH_4 .

9. Tell the nature of the solution to $X^2 + 3X - 5 = 0$ by using the discriminant.
10. Solve to find the exact root(s) of #9. Factor when possible.
11. Tell the nature of the solution to $3X^2 = X + 3$ by using the discriminant.
12. Solve to find the exact root(s) of #11. Factor when possible.
13. Tell the nature of the solution to $3X^2 - 5X = -2$ by using the discriminant.
14. Solve to find the exact root(s) of #13. Factor when possible.

Find the roots using the quadratic formula.

15. $4X^2 + 7X = 2$

16. $3X^2 + 5 = 8X$

Solve for X. Complete the square if necessary.

17. $X^2 - 8X + 9 = 0$

18. Check the answers to #17 by placing them in the original equation.

19. Expand $(2X - 1)^5$.

20. What is the sixth term of $(2X - 3)^5$?