

1. (8) A train travels at a rate of 123,200 yards per hour. How fast does the train travel in miles per hour? (Hint: A mile is equal to 1760 yards.)

2. (2) Identify the terms in the expression

$$7ab + 9c + \frac{12a}{5b}$$

3. (22) The stem-and-leaf plot shows the scores on a math test. Find the median score on the math test.

Stem	Leaf
5	8
6	3 7 9
7	0 0 3 7 8
8	0 1 2 4 8
9	1 5 8 8

4. (13) The area of a square rug is 225 square feet. What is the side length of the rug?

Simplify problems 5–11.

5. (3) $a^3 \cdot b^2 \cdot b^7 \cdot a^4 \cdot b^4$

6. (4) $5^2 - 4 \div 2 + 6 \cdot (2)^3$

7. (5) $-|9 - 4|$

8. (7) $6 + 2[(5 - 3)^3 + 4]$

9. (11) $4.5 \div (-9)$

10. (15) $-ab(bc^2 - a^2)$

11. (18) $3x^3 + y^2 + 2x^3 + 3y^2$

12. ⁽²⁵⁾ Kate is knitting a 90-inch scarf at the rate of 8 inches per day. Write a rule in function notation to find the number of inches she has left to knit at the end of any given day. Let d represent the number of days spent knitting.

13. ⁽¹⁴⁾ There are 9 blue marbles, 2 red marbles, and 1 green marble in a bag. If a marble is randomly chosen, what is the probability that it is not blue?

14. ⁽²⁰⁾ Complete the table for the equation $y = 3x + 3$.

x	y
-2	
0	
2	
$\frac{2}{3}$	

Solve problems 15–18.

15. ⁽²¹⁾ $-6 = \frac{1}{3}x$

16. ⁽²³⁾ $\frac{1}{2}a - \frac{3}{4} = \frac{5}{6}$

17. ⁽²⁴⁾ $0.3r + 0.2 = 1.7$

18. ⁽¹⁹⁾ $-13 = x + 6$

For problems 19–20, evaluate each expression for the given values of the variables.

19. ⁽¹⁶⁾ $\frac{x(3yz)}{xz}$ for $x = 4$, $y = 3$, and $z = -2$.

20. ⁽⁹⁾ $2(m - n)^3 + 3m^2$ for $m = 5$ and $n = 2$.