

5.1 Exercises

Count the number of terms in each expression.

1. $3x + 5$ 2. 7 3. $5x - 2$ 4. $8n - 13$

Write an expression for each phrase.

5. 6 more than a number
6. a number added to 9
7. the sum of a number and 5
8. 4 less than a number
9. 10 decreased by some number
10. the difference between a number and 6
11. one fourth of some number
12. twice a number
13. the product of a number and 4
14. a number divided by 6
15. the ratio of 8 and some number
16. the quotient of a number and 3
17. 7 more than the product of a number and 4
18. 1 less than twice a number

Write an equation for each sentence.

19. 6 more than the quotient of a number and 4 is 8.
20. If 5 is subtracted from twice a number, the result is 11.
21. 4 times the sum of a number and 3 is 12.

Select the correct response.

22. Which of the following words is used to indicate multiplication?
A. sum B. difference C. product D. quotient
23. Which of the following does not indicate subtraction?
A. less than B. difference
C. decreased by D. ratio of
24. Which of the following shows “twice the sum of a number and 8”?
A. $2(x + 8)$ B. $2x + 8$ C. $(x - 8)$ D. $2 + (x + 8)$

5.2 Exercises

Decide whether each term is a constant term. Write *yes* or *no*.

1. $8n$

2. -7

Rewrite each expression, using the Commutative Property of Addition or Multiplication.

3. $4 + 6$

4. $n \times 7$

5. $4x + 5$

Rewrite each expression, using the Associative Property of Addition or Multiplication.

6. $4 + (5 + 9)$

7. $(7 \times 5) \times 2$

8. $2 \times 5n$

Use the Distributive Property to find each product.

9. 4×99

10. 6×104

Write an equivalent expression.

11. $3(5x + 4)$

12. $-5(2n + 6)$

13. $10(3a - 7)$

14. $-(-4y - 6)$

Factor out the greatest common factor in each expression.

15. $8x + 16$

16. $12n - 4$

17. $20a - 30$

Combine like terms.

18. $10x - 7x$

19. $5n + 6n - n$

20. $3y - 8y$

Simplify each expression.

21. $8n + b - 2n - 4b$

22. $5x + 2(3x - 5) + 2$

23. $-2(-5n - 3) - (n + 2)$

24. Which property is illustrated by $5(2x + 1) = 10x + 5$?

A. Commutative Property of Multiplication

B. Distributive Property

C. Associative Property of Multiplication

D. The example does not illustrate a property.

25. Which of the following shows the expression $24x - 36$ with the greatest common factor factored out?

A. $2(12x - 18)$

B. $3(8x - 12)$

C. $6(4x - 6)$

D. $12(2x - 3)$