

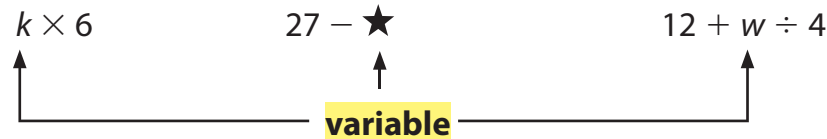
Learning Target: Evaluate algebraic expressions given values of their variables.

Success Criteria:

- I can substitute a number for a variable in an algebraic expression.
- I can evaluate an algebraic expression with one operation.
- I can evaluate an algebraic expression with more than one operation.

Think and Grow

Key Idea An **algebraic expression** is an expression that contains numbers, operations, and *variables*. To evaluate an algebraic expression, substitute a number for each variable.



Example Evaluate $n + 10$ when $n = 23$.

$$n + 10 = \underline{\quad} + 10$$

$$= \underline{\quad}$$

Substitute 23 for n .

Add 23 and 10.

Remember to use the order of operations.

Example Evaluate $17 - y \times 5$ when $y = 3$.

$$17 - y \times 5 = 17 - \underline{\quad} \times 5$$

$$= 17 - \underline{\quad}$$

$$= \underline{\quad}$$

Substitute 3 for y .

Multiply 3 and 5.

Subtract 15 from 17.



Show and Grow

1. Evaluate $25 + b$ when $b = 46$.

2. Evaluate $c - 28$ when $c = 54$.

3. Evaluate $4 \times h$ when $h = 15$.

4. Evaluate $p \div 8$ when $p = 72$.

5. Evaluate $z + 12 \times 2$ when $z = 6$.

6. Evaluate $36 - 30 \div q$ when $q = 3$.

Practice

Name _____

Evaluate the expression when $m = 12$.

7. $41 - m$

8. $96 \div m$

9. $m + 28$

Evaluate the expression when $d = 5$.

10. $37 - 2 \times d$

11. $6 \times d \div 10$

12. $(79 + d) \div (22 - 15)$

DIG DEEPER!

Evaluate the expression when $f = 2$ and $g = 3$.

13. $f \times g + 17$

14. $5 + (21 - g) \div f$

15. **MP Structure** Evaluate $8 + \star \times 7$ when $\star = 4$.

16. **MP Number Sense** Will the value of the expression be greater when $w = 3$ or when $w = 6$? Explain how you know without evaluating the expression.

$$48 \div w$$

17. **Open-Ended** Write an algebraic expression. Give the value of the variable. Then evaluate the expression.

18. **Modeling Real Life** The expression $15 \times p$ gives the total cost (in dollars) of a soccer team's jerseys, where p is the number of players. What is the total cost of jerseys for a team with 9 players?

19. **Modeling Real Life** The expression $25 + (8 \times m)$ gives the cost (in dollars) of a video streaming service for m months. What is the cost of the service for 6 months? 1 year?

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