

Revisiting Arithmetic Expressions and Omission of Multiplication Symbol

A. Fill in the Blanks

1. In the expression $9k$, the number 9 is called the _____.
2. The expression $a \times b - c \times d$ can be written without multiplication symbols as _____.
3. To write $5(x + y)$ with multiplication symbols, we would write _____.
4. According to convention, the expression $y \times 6$ is properly written as _____.
5. In algebra, a letter that represents an unknown number is called a _____.

B. Match the expression in Column A with its equivalent simplified form in Column B.

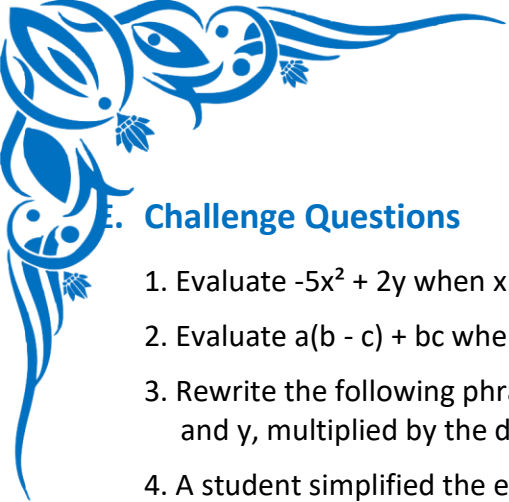
Column A	Column B
1. $4 \times (x - y)$	A. m
2. $a \times b + c \times d$	B. y^2
3. $1 \times m$	C. $4(x - y)$
4. $y \times y$	D. $ab + cd$
5. $(p + q) \times 1$	E. $p + q$

C. Rewrite the following expressions by omitting the multiplication symbol.

1. $-8 \times a \times b =$ _____
2. $x \times y - 4 \times z =$ _____
3. $(a + b) \times (c - d) =$ _____
4. Evaluate $5x + 3$ when $x = 4$.
5. Evaluate $10 - 2a$ when $a = -3$.

D. Rewrite the following expressions by omitting the multiplication symbol where appropriate.

1. $7 \times x =$ _____
2. $a \times b =$ _____
3. $5 \times (y + 3) =$ _____
4. $m \times n + 2 \times p =$ _____
5. $1 \times k =$ _____



E. Challenge Questions

1. Evaluate $-5x^2 + 2y$ when $x = -3$ and $y = 10$. (Remember the order of operations!)
2. Evaluate $a(b - c) + bc$ when $a = 4$, $b = -2$, and $c = 5$.
3. Rewrite the following phrase as an algebraic expression, omitting multiplication symbols: "The sum of x and y , multiplied by the difference of p and q ."
4. A student simplified the expression $4 + 2(x - 1)$ to $6(x - 1)$. Explain the student's error and provide the correct first step of simplification.
5. Evaluate $\left(\frac{3x}{4}\right) - 2(y + z)$ when $x = 8$, $y = -1$, and $z = -4$.

F. Write an expression for each scenario and then solve.

1. The perimeter of a rectangle is given by the formula $2 \times l + 2 \times w$, where l is the length and w is the width. Rewrite the formula without multiplication symbols. Then, find the perimeter if the length is 15 cm and the width is 8 cm.
 - Formula: _____
 - Perimeter: _____
2. The cost of buying movie tickets is 12 per adult (a) and 8 per child (c). Write an expression for the total cost. Then, calculate the total cost for 3 adults and 4 children.
 - Expression: _____
 - Total Cost: _____
3. The formula to convert temperature from Celsius (C) to Fahrenheit (F) is $F = (9/5) \times C + 32$. Rewrite this formula without the multiplication symbol. Then, find the Fahrenheit temperature when it is 20°C .
 - Formula: _____
 - Fahrenheit Temperature: _____
4. A taxi service charges a 3 flat fee plus 2 for every mile (m) traveled. Write an expression for the total cost of a taxi ride. Then, find the cost of a 7-mile ride.
 - Expression: _____
 - Total Cost: _____
5. You are buying p pencils that cost 0.50 each and n notebooks that cost 3 each. Write an expression for the total cost. What is the total cost if you buy 6 pencils and 3 notebooks?
 - Expression: _____
 - Total Cost: _____

G. True or False

1. The expression 8×9 can be written as 89. _____
2. $5 + 2x$ can be simplified to $7x$. _____
3. The expression $(x + y) \times 2$ is most commonly written as $(x + y)2$. _____
4. In the expression ab , a and b are being added together. _____
5. $m \times m \times m$ can be written as $3m$. _____