

Evaluating Expressions Worksheet 7th Questions and Answers PDF

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Part 1: Building a Foundation

What is an algebraic expression?

Hint: Think about what components make up an algebraic expression.

- A) A combination of numbers and operations only
- B) A combination of variables and operations only
- C) A combination of numbers, variables, and operations ✓
- D) A combination of numbers and variables only

■ An algebraic expression is a combination of numbers, variables, and operations.

What is an algebraic expression?

Hint: Think about the components that make up an expression.

- A) A combination of numbers and operations only
- B) A combination of variables and operations only
- C) A combination of numbers, variables, and operations ✓
- D) A combination of numbers and variables only

■ An algebraic expression is a combination of numbers, variables, and operations.

What is an algebraic expression?

- A) A combination of numbers and operations only
- B) A combination of variables and operations only
- C) A combination of numbers, variables, and operations ✓
- D) A combination of numbers and variables only

■ An algebraic expression is a combination of numbers, variables, and operations.

Which of the following are components of an algebraic expression?

Hint: Consider the different parts that make up an expression.

- A) Variables ✓**
- B) Coefficients ✓**
- C) Exponents ✓**
- D) Constants ✓**

Components of an algebraic expression include variables, coefficients, exponents, and constants.

Which of the following are components of an algebraic expression?

Hint: Consider the elements that make up an expression.

- A) Variables ✓**
- B) Coefficients ✓**
- C) Exponents ✓**
- D) Constants ✓**

Components of an algebraic expression include variables, coefficients, exponents, and constants.

Which of the following are components of an algebraic expression?

- A) Variables ✓**
- B) Coefficients ✓**
- C) Exponents ✓**
- D) Constants ✓**

Components of an algebraic expression include variables, coefficients, exponents, and constants.

Explain the purpose of using variables in algebraic expressions.

Hint: Think about how variables help represent unknown values.

Variables are used in algebraic expressions to represent unknown values and allow for generalization in mathematical statements.

Explain the purpose of using variables in algebraic expressions.

Hint: Think about how variables represent unknown values.

Variables allow us to represent unknown values and create general formulas.

Explain the purpose of using variables in algebraic expressions.

Variables are used in algebraic expressions to represent unknown values and allow for generalization of mathematical relationships.

List the steps in the order of operations (PEMDAS/BODMAS).

Hint: Remember the acronym that helps you recall the order.

1. What is the first step?

Parentheses

2. What is the second step?

Exponents

3. What is the third step?

Multiplication and Division

4. What is the fourth step?

Addition and Subtraction

The order of operations is Parentheses, Exponents, Multiplication and Division (from left to right), Addition and Subtraction (from left to right).

What is the coefficient in the expression $5x + 3$?

Hint: Identify the number that multiplies the variable.

- A) 5 ✓
- B) x
- C) 3
- D) 8

The coefficient in the expression $5x + 3$ is 5.

What is the coefficient in the expression $5x + 3$?

Hint: Identify the number that multiplies the variable.

- A) 5 ✓
- B) x
- C) 3
- D) 8

| The coefficient in the expression $5x + 3$ is 5.

What is the coefficient in the expression $5x + 3$?

- A) 5 ✓
- B) x
- C) 3
- D) 8

| The coefficient in the expression $5x + 3$ is the number that multiplies the variable x , which is 5.

Part 2: Comprehension and Application

Why is it important to follow the order of operations when evaluating expressions?

Hint: Consider the consequences of not following the order.

- A) To ensure the expression looks neat
- B) To obtain the correct result ✓
- C) To make the expression longer
- D) To avoid using variables

| Following the order of operations is important to obtain the correct result when evaluating expressions.

Why is it important to follow the order of operations when evaluating expressions?

Hint: Consider the consequences of not following the order.

- A) To ensure the expression looks neat
- B) To obtain the correct result ✓
- C) To make the expression longer
- D) To avoid using variables

| Following the order of operations ensures that we obtain the correct result.

Why is it important to follow the order of operations when evaluating expressions?

- A) To ensure the expression looks neat
- B) To obtain the correct result ✓

- C) To make the expression longer
- D) To avoid using variables

Following the order of operations ensures that we obtain the correct result when evaluating mathematical expressions.

Which of the following expressions are simplified correctly?

Hint: Look for expressions that follow the rules of simplification.

- A) $3x + 2x = 5x$ ✓
- B) $4y - y = 3y$ ✓
- C) $2(a + b) = 2a + 2b$ ✓
- D) $6z + 3 = 9z$

The correctly simplified expressions are $3x + 2x = 5x$, $4y - y = 3y$, and $2(a + b) = 2a + 2b$.

Which of the following expressions are simplified correctly?

Hint: Look for expressions that follow the rules of simplification.

- A) $3x + 2x = 5x$ ✓
- B) $4y - y = 3y$ ✓
- C) $2(a + b) = 2a + 2b$ ✓
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Correctly simplified expressions include $3x + 2x = 5x$, $4y - y = 3y$, and $2(a + b) = 2a + 2b$.

Which of the following expressions are simplified correctly?

- A) $3x + 2x = 5x$ ✓
- B) $4y - y = 3y$ ✓
- C) $2(a + b) = 2a + 2b$ ✓
- D) $6z + 3 = 9z$

The correctly simplified expressions include $3x + 2x = 5x$, $4y - y = 3y$, and $2(a + b) = 2a + 2b$.

Describe how you would substitute a value into the expression $2x + 5$.

Hint: Think about the steps you would take to replace the variable.

To substitute a value into the expression $2x + 5$, replace x with the given value and then perform the arithmetic.

Describe how you would substitute a value into the expression $2x + 5$.

Hint: Think about replacing the variable with a number.

To substitute a value, replace x with the given number and then perform the arithmetic.

Describe how you would substitute a value into the expression $2x + 5$.

To substitute a value into the expression, replace the variable x with the given value and then perform the arithmetic operations.

If $x = 3$, what is the value of the expression $4x - 7$?

Hint: Substitute the value of x into the expression and calculate.

A) 5 ✓

- B) 7
- C) 12
- D) 17

■ If $x = 3$, the value of the expression $4x - 7$ is 5.

If $x = 3$, what is the value of the expression $4x - 7$?

Hint: Substitute the value of x into the expression.

- A) 5 ✓
- B) 7
- C) 12
- D) 17

■ The value of the expression $4x - 7$ when $x = 3$ is 5.

If $x = 3$, what is the value of the expression $4x - 7$?

- A) 5 ✓
- B) 7
- C) 12
- D) 17

■ If $x = 3$, the value of the expression $4x - 7$ is 5.

Evaluate the expression $3a + 2b$ when $a = 2$ and $b = 4$.

Hint: Substitute the values of a and b into the expression.

- A) 10 ✓
- B) 14
- C) 16
- D) 18

■ When $a = 2$ and $b = 4$, the value of the expression $3a + 2b$ is 10.

Evaluate the expression $3a + 2b$ when $a = 2$ and $b = 4$.

Hint: Substitute the values of a and b into the expression.

- A) 10 ✓

- B) 14
- C) 16
- D) 18

■ The evaluated expression $3a + 2b$ when $a = 2$ and $b = 4$ equals 10.

Evaluate the expression $3a + 2b$ when $a = 2$ and $b = 4$.

- A) 10
- B) 14 ✓
- C) 16
- D) 18

■ When $a = 2$ and $b = 4$, the value of the expression $3a + 2b$ is 14.

Part 3: Analysis, Evaluation, and Creation

Which of the following correctly shows the distributive property?

Hint: Recall the definition of the distributive property.

- A) $a(b + c) = ab + ac$ ✓
- B) $a(b + c) = a + b + c$
- C) $a(b + c) = ab + bc$
- D) $a(b + c) = ac + bc$

■ The correct representation of the distributive property is $a(b + c) = ab + ac$.

Which of the following correctly shows the distributive property?

Hint: Think about how multiplication distributes over addition.

- A) $a(b + c) = ab + ac$ ✓
- B) $a(b + c) = a + b + c$
- C) $a(b + c) = ab + bc$
- D) $a(b + c) = ac + bc$

■ The distributive property is correctly shown by $a(b + c) = ab + ac$.

Which of the following correctly shows the distributive property?

- A) $a(b + c) = ab + ac$ ✓
- B) $a(b + c) = a + b + c$
- C) $a(b + c) = ab + bc$
- D) $a(b + c) = ac + bc$

■ The distributive property is correctly shown by $a(b + c) = ab + ac$.

Identify the like terms in the expression $4x + 3y - 2x + 5$.

Hint: Look for terms that have the same variable part.

- A) $4x$ and $-2x$ ✓
- B) $3y$ and 5
- C) $4x$ and $3y$
- D) $-2x$ and 5

■ The like terms in the expression are $4x$ and $-2x$.

Identify the like terms in the expression $4x + 3y - 2x + 5$.

Hint: Look for terms that have the same variable.

- A) $4x$ and $-2x$ ✓
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- A) $4x$ and $-2x$ ✓
- B) $3y$ and 5
- C) $4x$ and $3y$
- D) $-2x$ and 5

■ The like terms in the expression are $4x$ and $-2x$.

Analyze the expression $2(x + 3) - 4x$ and explain the steps to simplify it.

Hint: Think about how to distribute and combine like terms.

To simplify the expression $2(x + 3) - 4x$, distribute the 2, combine like terms, and simplify.

Analyze the expression $2(x + 3) - 4x$ and explain the steps to simplify it.

Hint: Consider distributing and combining like terms.

To simplify, distribute 2 to both terms in the parentheses and then combine like terms.

Analyze the expression $2(x + 3) - 4x$ and explain the steps to simplify it.

To simplify the expression, distribute the 2, combine like terms, and simplify further to obtain the final result.

If the expression $5x - 3 = 2x + 9$ is true, what is the value of x ?

Hint: Isolate x on one side of the equation.

- A) 3
 B) 4 ✓
 C) 5
 D) 6

■ The value of x is 4.

If the expression $5x - 3 = 2x + 9$ is true, what is the value of x ?

Hint: Isolate x on one side of the equation.

- A) 3
 B) 4 ✓
 C) 5
 D) 6

■ The value of x is 4.

If the expression $5x - 3 = 2x + 9$ is true, what is the value of x ?

- A) 3
 B) 4 ✓
 C) 5
 D) 6

■ If the expression is true, the value of x is 4.

Consider the expression $2x + 3y = 12$. Which of the following pairs (x, y) satisfy the equation?

Hint: Substitute the pairs into the equation to check if they hold true.

- A) (3, 2) ✓
 B) (2, 3) ✓
 C) (4, 0) ✓
 D) (0, 4)

■ The pairs (3, 2), (2, 3), and (4, 0) satisfy the equation $2x + 3y = 12$.

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■ The pairs (3, 2), (2, 3), and (4, 0) satisfy the equation $2x + 3y = 12$.

Create an algebraic expression that represents the total cost (C) of buying x apples at \$2 each and y bananas at \$1.50 each.

Hint: Think about how to express the total cost in terms of x and y.

■ The algebraic expression for the total cost is $C = 2x + 1.5y$.

Create an algebraic expression that represents the total cost (C) of buying x apples at \$2 each and y bananas at \$1.50 each.

Hint: Think about how to express total cost in terms of x and y.

| The expression for total cost is $C = 2x + 1.5y$.

Create an algebraic expression that represents the total cost (C) of buying x apples at \$2 each and y bananas at \$1.50 each.

| The algebraic expression for the total cost is $C = 2x + 1.5y$.