

Evaluating Expressions Worksheet 7th Answer Key PDF

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Part 1: Building a Foundation

What is an algebraic expression?

undefined. A) A combination of numbers and operations only

undefined. B) A combination of variables and operations only

undefined. C) A combination of numbers, variables, and operations ✓

undefined. D) A combination of numbers and variables only

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

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

Which of the following are components of an algebraic expression?

- undefined. A) Variables ✓
- undefined. B) Coefficients ✓
- undefined. C) Exponents ✓
- undefined. D) Constants ✓

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

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

Explain the purpose of using variables in algebraic expressions.

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

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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).

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 $5x + 3$?

undefined. A) 5 ✓

undefined. B) x

undefined. C) 3

undefined. D) 8

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

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

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undefined. B) x

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undefined. 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?

undefined. A) To ensure the expression looks neat

undefined. B) To obtain the correct result ✓

undefined. C) To make the expression longer

undefined. D) To avoid using variables

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

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

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undefined. 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?

undefined. A) $3x + 2x = 5x$ ✓

undefined. B) $4y - y = 3y$ ✓

undefined. C) $2(a + b) = 2a + 2b$ ✓

undefined. 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?

undefined. A) $3x + 2x = 5x$ ✓

undefined. B) $4y - y = 3y$ ✓

undefined. C) $2(a + b) = 2a + 2b$ ✓

undefined. D) $6z + 3 = 9z$

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

Which of the following expressions are simplified correctly?

undefined. A) $3x + 2x = 5x$ ✓

undefined. B) $4y - y = 3y$ ✓

undefined. C) $2(a + b) = 2a + 2b$ ✓

undefined. 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 $2x + 5$.

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 $2x + 5$.

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 $4x - 7$?

undefined. A) 5 ✓

undefined. B) 7

undefined. C) 12

undefined. D) 17

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

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

undefined. A) 5 ✓

undefined. B) 7

undefined. C) 12

undefined. D) 17

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

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

undefined. A) 5 ✓

undefined. B) 7

undefined. C) 12

undefined. D) 17

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

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

undefined. A) 10 ✓

undefined. B) 14

undefined. C) 16

undefined. 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 $b = 4$.

undefined. A) 10 ✓

undefined. B) 14

undefined. C) 16

undefined. D) 18

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

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

undefined. A) 10

undefined. B) 14 ✓

undefined. C) 16

undefined. 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?

undefined. A) $a(b + c) = ab + ac$ ✓

undefined. B) $a(b + c) = a + b + c$

undefined. C) $a(b + c) = ab + bc$

undefined. 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?

undefined. A) $a(b + c) = ab + ac$ ✓

undefined. B) $a(b + c) = a + b + c$

undefined. C) $a(b + c) = ab + bc$

undefined. 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?

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undefined. 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 $4x + 3y - 2x + 5$.

undefined. A) $4x$ and $-2x$ ✓

undefined. B) $3y$ and 5

undefined. C) $4x$ and $3y$

undefined. D) $-2x$ and 5

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

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

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

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undefined. B) $3y$ and 5

undefined. C) $4x$ and $3y$

undefined. 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.

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.

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 ?

undefined. A) 3

undefined. B) 4 ✓

undefined. C) 5

undefined. D) 6

The value of x is 4.

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

undefined. A) 3

undefined. B) 4 ✓

undefined. C) 5

undefined. D) 6

The value of x is 4.

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

undefined. A) 3

undefined. B) 4 ✓

undefined. C) 5

undefined. 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?

undefined. A) (3, 2) ✓

undefined. B) (2, 3) ✓

undefined. C) (4, 0) ✓

undefined. D) (0, 4)

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

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undefined. **C) (4, 0) ✓**

undefined. D) (0, 4)

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.

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

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