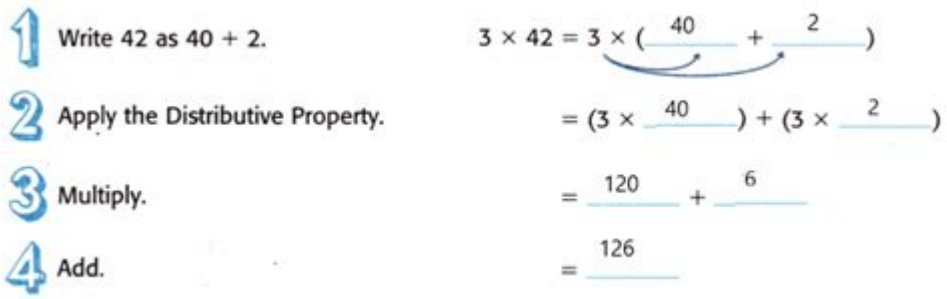
My Homework Lesson 7 The Distributive Property Answers



My homework lesson 7 the distributive property answers is a critical topic in mathematics that serves as a foundational concept for solving various algebraic expressions. Understanding the distributive property is essential for students as it simplifies complex problems and enhances their problem-solving skills. This article will delve into what the distributive property is, its significance, how it is applied, and provide answers and examples related to lesson 7 of a typical homework assignment.

What is the Distributive Property?

The distributive property is a fundamental property of arithmetic that describes how multiplication interacts with addition and subtraction. According to the distributive property, when you multiply a number by a sum (or difference), you can distribute the multiplication over each term inside the parentheses.

Mathematically, the distributive property can be expressed as:

$$ a(b + c) = ab + ac $$

Where:
- $ a $ is the number being multiplied,
- $ b $ and $ c $ are the terms inside the parentheses.

Understanding the Components

To better grasp the distributive property, it is essential to break down its components:

1. Multiplicand: The number that is being multiplied.
2. Multiplier: The number by which the multiplicand is multiplied.
3. Terms: The individual numbers or variables inside the parentheses.

Why is the Distributive Property Important?

The distributive property is crucial for several reasons:

- Simplification: It allows for the simplification of expressions making them easier to solve.
- Problem Solving: It is a stepping stone for solving equations and inequalities.
- Foundation for Algebra: Understanding this property is essential for progressing to more complex algebraic concepts such as factoring and expanding polynomials.

Applying the Distributive Property

To utilize the distributive property, follow these steps:

1. Identify the expression that you need to simplify or solve.
2. Determine the multiplicand and the terms inside the parentheses.
3. Distribute the multiplicand to each term inside the parentheses.
4. Combine like terms if necessary.

Examples of Using the Distributive Property

Let’s look at a few examples to illustrate how the distributive property works:

Example 1: Simplifying $3(4 + 5)$

1. Identify the multiplicand: 3
2. Identify the terms: 4 and 5
3. Apply the distributive property:

$$
3(4) + 3(5) = 12 + 15 = 27
$$

Example 2: Simplifying $2(6 - 3)$

1. Identify the multiplicand: 2
2. Identify the terms: 6 and -3
3. Apply the distributive property:

$$
2(6) - 2(3) = 12 - 6 = 6
$$

Example 3: Distributing a variable: $x(2 + 3y)$

1. Identify the multiplicand: x
2. Identify the terms: 2 and $3y$
3. Apply the distributive property:

$$
x(2) + x(3y) = 2x + 3xy
$$

Common Problems Related to the Distributive Property

Students often encounter various types of problems that require the application of the distributive property. Below are some common problem types:

- Distributing a single term across multiple terms inside parentheses.
- Combining like terms after distribution.
- Factoring expressions using the distributive property.
- Solving equations that involve the distributive property.

Example Problems

Let's take a look at some typical problems related to the distributive property that could be found in homework lesson 7.

Problem 1: Simplify $5(2x + 3)$.

Solution:

$$
5(2x) + 5(3) = 10x + 15
$$

Problem 2: Solve for x in the equation $4(x + 2) = 28$.

Solution:

1. Apply the distributive property:

$$
4x + 8 = 28
$$

2. Subtract 8 from both sides:

$$
4x = 20
$$

3. Divide by 4:

$$
x = 5
$$

Problem 3: Factor the expression $12x + 18$.

Solution:

1. Identify the greatest common factor (GCF), which is 6.
2. Factor out the GCF:

$$
6(2x + 3)
$$

Practice Problems

To reinforce the understanding of the distributive property, students can practice the following problems:

1. Simplify $7(3 + 4)$.

2. Simplify $10(x - 5)$.

3. Solve for x in the equation $3(2x + 1) = 21$.

4. Factor $9x + 12$.

5. Simplify $2(5 + 3x) - 4$.

Conclusion

Understanding the distributive property is essential for mastering algebra and performing arithmetic operations effectively. By knowing how to apply this property, students can simplify complex expressions, solve equations, and prepare themselves for more advanced mathematical concepts. Homework lesson 7 on the distributive property provides valuable practice opportunities to reinforce this essential skill. As students work through problems and examples, they will develop a deeper understanding of how to manipulate expressions, making them more adept at tackling a variety of mathematical challenges.

Frequently Asked Questions

What is the distributive property?

The distributive property states that a(b + c) = ab + ac, meaning you can distribute a multiplication over addition.

How do you apply the distributive property in lesson 7?

In lesson 7, you apply the distributive property by multiplying a single term outside the parentheses by

each term inside the parentheses.

Can you provide an example of using the distributive property?

Sure! For example, using the distributive property on 3(4 + 5) gives you 34 + 35, which equals 12 + 15 = 27.

What are common mistakes when using the distributive property?

Common mistakes include forgetting to multiply every term inside the parentheses or adding terms incorrectly after distribution.

How does the distributive property help in solving equations?

The distributive property simplifies expressions, making it easier to solve equations by combining like terms or eliminating parentheses.

Where can I find more practice problems related to the distributive property?

You can find more practice problems in your textbook, online educational platforms, or math worksheets specifically focused on the distributive property.

My Homework Lesson 7 The Distributive Property Answers

My Service Canada Account (MSCA) - Canada.ca
To access your personal income tax slips (such as T3, T4, T4RIF, T4RSP, T5, T5007 and T5008), visit CRA My account for Individuals. How to change your direct deposit information, mailing ...

Sign in to your account

Access and manage all your Microsoft apps and services in one place with My Apps.

Sign in to your Sun Life account
Sign in to your Sun Life account Manage your benefits, savings and investment plans online with my Sun Life. It’s password-protected, convenient and paperless.

Welcome to My Activity
Welcome to My Activity Data helps make Google services more useful for you. Sign in to review and manage your activity, including things you’ve searched for, websites you’ve visited, and …

My Self Serve - Home
If you are currently in receipt of income or disability assistance, My Self Serve will allow you to securely access your current information online. For example, you can view personal …

Sign in to a Government of Canada online account
My Service Canada Account Update Employment Insurance (EI) details, Canada Pension Plan (CPP), Old Age Security (OAS), National Student Loans Service Centre (NSLSC), Canadian …

Oracle PeopleSoft Sign-in
For student applicants, alumni, and guests.Account FAQs Contact Support

Microsoft account | Sign In or Create Your Account Today – …
Get access to free online versions of Outlook, Word, Excel, and PowerPoint.

Sign in to your IRCC secure account - Canada.ca
Enter the answer to the recovery question you’re prompted with in the My Recovery Answer field. You should find the questions and hints above each field. If you correctly answered all the …

MyDisney Account
Apr 30, 2025 · MyDisney lets you seamlessly log in to services and experiences across The Walt Disney Family of Companies, such as Disney+, ESPN, Walt Disney World, and more.

My Service Canada Account (MSCA) - Canada.ca
To access your personal income tax slips (such as T3, T4, T4RIF, T4RSP, T5, T5007 and T5008), visit CRA My account for Individuals. How to change your direct deposit information, mailing …

Sign in to your account
Access and manage all your Microsoft apps and services in one place with My Apps.

Sign in to your Sun Life account
Sign in to your Sun Life account Manage your benefits, savings and investment plans online with my Sun Life. It’s password-protected, convenient and paperless.

Welcome to My Activity
Welcome to My Activity Data helps make Google services more useful for you. Sign in to review and manage your activity, including things you’ve searched for, websites you’ve visited, and …

My Self Serve - Home
If you are currently in receipt of income or disability assistance, My Self Serve will allow you to securely access your current information online. For example, you can view personal …

Sign in to a Government of Canada online account
My Service Canada Account Update Employment Insurance (EI) details, Canada Pension Plan (CPP), Old Age Security (OAS), National Student Loans Service Centre (NSLSC), Canadian …

Oracle PeopleSoft Sign-in
For student applicants, alumni, and guests.Account FAQs Contact Support

Microsoft account | Sign In or Create Your Account Today – …
Get access to free online versions of Outlook, Word, Excel, and PowerPoint.

Sign in to your IRCC secure account - Canada.ca
Enter the answer to the recovery question you're prompted with in the My Recovery Answer field. You should find the questions and hints above each field. If you correctly answered all the …

MyDisney Account
Apr 30, 2025 · MyDisney lets you seamlessly log in to services and experiences across The Walt Disney Family of Companies, such as Disney+, ESPN, Walt Disney World, and more.

Struggling with "My Homework Lesson 7 The Distributive Property Answers"? Discover clear explanations and step-by-step solutions. Learn more to ace your math!

Back to Home