

Multiplying Integers Worksheet Answer Key PDF

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Part 1: Foundational Knowledge

What is the result of multiplying two negative integers?

undefined. A) Positive ✓

undefined. A) Negative

undefined. A) Zero

undefined. A) Undefined

The product of two negative integers is positive.

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undefined. A) Positive ✓

undefined. A) Negative

undefined. A) Zero

undefined. A) Undefined

The result is positive.

Which of the following are considered integers? (Select all that apply)

undefined. A) -3 ✓

undefined. A) 0.5

undefined. A) 7 ✓

undefined. A) 0 ✓

Integers include negative numbers, zero, and positive whole numbers.

Which of the following are considered integers? (Select all that apply)

undefined. A) -3 ✓

undefined. A) 0.5

undefined. A) 7 ✓

undefined. A) 0 ✓

The integers are -3, 7, and 0.

Explain the commutative property of multiplication using integers.

The commutative property states that changing the order of the integers does not change the product.

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The commutative property states that changing the order of the factors does not change the product.

List the outcomes of multiplying the following pairs of integers:

1. a) 4×-5

-20

2. b) -6×-2

12

3. c) 3×0

0

The products are: a) -20, b) 12, c) 0.

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1. a) 4×-5

-20

2. b) -6×-2

12

3. c) 3×0

0

The outcomes are -20, 12, and 0.

Which property of multiplication states that the product of any integer and zero is zero?

undefined. A) Commutative Property

undefined. A) Associative Property

undefined. A) Zero Property ✓

undefined. A) Multiplicative Identity

This is known as the Zero Property of Multiplication.

Which property of multiplication states that the product of any integer and zero is zero?

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undefined. A) Zero Property ✓

undefined. A) Multiplicative Identity

This is known as the Zero Property.

Part 2: comprehension

If a positive integer is multiplied by a negative integer, what is the sign of the product?

undefined. A) Positive

undefined. A) Negative ✓

undefined. A) Zero

undefined. A) Cannot be determined

The product will be negative.

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The product will be negative.

Which of the following scenarios correctly apply the associative property of multiplication? (Select all that apply)

undefined. A) $(2 \times 3) \times 4 = 2 \times (3 \times 4)$ ✓

undefined. A) $5 \times (1 \times 6) = (5 \times 1) \times 6$ ✓

undefined. A) $7 \times 0 = 0$

undefined. A) $(8 \times 2) \times 1 = 8 \times (2 \times 1)$ ✓

The associative property allows for regroupment without changing the product.

Which of the following scenarios correctly apply the associative property of multiplication? (Select all that apply)

undefined. A) $(2 \times 3) \times 4 = 2 \times (3 \times 4)$ ✓

undefined. A) $5 \times (1 \times 6) = (5 \times 1) \times 6$ ✓

undefined. A) $7 \times 0 = 0$

undefined. A) $(8 \times 2) \times 1 = 8 \times (2 \times 1)$ ✓

The correct scenarios are A, B, and D.

Describe a real-world situation where multiplying integers is necessary, and explain the significance of the sign of the product.

Multiplying integers can represent real-world situations like financial gains or losses.

Describe a real-world situation where multiplying integers is necessary, and explain the significance of the sign of the product.

A real-world example could be calculating profit and loss.

Part 3: Application and Analysis

A hiker descends a mountain at a rate of 300 feet per hour. If the hiker continues this descent for 4 hours, what is the total change in elevation?

undefined. A) 1200 feet

undefined. A) -1200 feet ✓

undefined. A) 300 feet

undefined. A) -300 feet

The total change in elevation is -1200 feet.

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The total change in elevation is -1200 feet.

In which of the following situations would you use integer multiplication? (Select all that apply)

undefined. A) Calculating the total loss in a stock market crash ✓

undefined. A) Determining the number of apples in 5 baskets, each containing 10 apples

undefined. A) Measuring the distance traveled by a car moving at a constant speed

undefined. A) Calculating the total temperature drop over several days ✓

Integer multiplication is used in scenarios involving total changes or quantities.

In which of the following situations would you use integer multiplication? (Select all that apply)

undefined. A) Calculating the total loss in a stock market crash ✓

undefined. A) Determining the number of apples in 5 baskets, each containing 10 apples

undefined. A) Measuring the distance traveled by a car moving at a constant speed

undefined. A) Calculating the total temperature drop over several days ✓

The applicable situations are A and D.

A company reports a profit of \$200 each day for 5 consecutive days, followed by a loss of \$150 each day for 3 consecutive days. Calculate the net profit or loss over these 8 days.

The net profit over these 8 days is \$650.

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The net profit is \$650.

Analyze the expression $(-3) \times (2 \times -4)$. Which of the following is the correct product?

undefined. A) 24 ✓

undefined. A) -24

undefined. A) 12

undefined. A) -12

The correct product is 24.

Analyze the expression $(-3) \times (2 \times -4)$. Which of the following is the correct product?

undefined. A) 24 ✓

undefined. A) -24

undefined. A) 12

undefined. A) -12

The correct product is 24.

Part 4: Evaluation and Creation

Evaluate the following statement: "Multiplying any integer by zero always results in zero, regardless of the integer's sign." Is this statement:

undefined. A) True ✓

undefined. A) False

undefined. A)

undefined. A)

This statement is true.

Create a real-world problem that involves multiplying integers and select the correct scenario:

undefined. A) Calculating the net change in temperature over a week ✓

undefined. A) Determining the total cost of items in a shopping cart

undefined. A) Estimating the total distance traveled by a vehicle

undefined. A) Calculating the net profit or loss in a business over a month ✓

The correct scenario involves calculating net profit or loss.

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undefined. A) Estimating the total distance traveled by a vehicle

undefined. A) Calculating the net profit or loss in a business over a month ✓

The correct scenarios are A and D.

Design a scenario where multiplying integers is necessary to solve a problem. Explain the situation, the integers involved, and the significance of the result.

A scenario could involve calculating total expenses or profits.

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