

Multiplying Integers Worksheet Questions and Answers PDF

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Part 1: Foundational Knowledge

What is the result of multiplying two negative integers?

Hint: Consider the rules of signs in multiplication.

- A) Positive ✓
- A) Negative
- A) Zero
- A) Undefined

■ The product of two negative integers is positive.

What is the result of multiplying two negative integers?

Hint: Think about the rules of multiplying negative numbers.

- A) Positive ✓
- A) Negative
- A) Zero
- A) Undefined

■ The result is positive.

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

Hint: Remember that integers include whole numbers and their negatives.

- A) -3 ✓
- A) 0.5
- A) 7 ✓
- A) 0 ✓

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

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

Hint: Remember that integers are whole numbers.

- A) -3 ✓**
- A) 0.5
- A) 7 ✓**
- A) 0 ✓**

The integers are -3, 7, and 0.

Explain the commutative property of multiplication using integers.

Hint: Think about how changing the order of factors affects the product.

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

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Hint: Consider how the order of numbers affects the product.

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:

Hint: Calculate each product carefully.

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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Hint: Calculate each product carefully.

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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?

Hint: Think about the role of zero in multiplication.

- A) Commutative Property
- A) Associative Property
- A) Zero Property ✓
- 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?

Hint: Think about the special role of zero in multiplication.

- A) Commutative Property
- A) Associative Property
- A) Zero Property ✓
- 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?

Hint: Consider the rules of signs in multiplication.

- A) Positive
- A) Negative ✓
- A) Zero
- A) Cannot be determined

■ The product will be negative.

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

Hint: Consider the rules for multiplying integers with different signs.

- A) Positive
- A) Negative ✓
- A) Zero
- A) Cannot be determined

■ The product will be negative.

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

Hint: Think about how grouping affects the product.

- A) $(2 \times 3) \times 4 = 2 \times (3 \times 4)$ ✓
- A) $5 \times (1 \times 6) = (5 \times 1) \times 6$ ✓
- A) $7 \times 0 = 0$
- 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)

Hint: Think about how grouping affects the product.

- A) $(2 \times 3) \times 4 = 2 \times (3 \times 4)$ ✓
- A) $5 \times (1 \times 6) = (5 \times 1) \times 6$ ✓
- A) $7 \times 0 = 0$
- 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.

Hint: Think about scenarios involving gains and losses.

■ 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.

Hint: Think about scenarios involving gains and losses.

■ 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?

Hint: Calculate the total distance using multiplication.

- A) 1200 feet
- A) -1200 feet ✓
- A) 300 feet
- A) -300 feet

■ The total change in elevation is -1200 feet.

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?

Hint: Calculate the total change using multiplication.

- A) 1200 feet
- A) -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)

Hint: Consider scenarios involving gains, losses, and quantities.

- A) Calculating the total loss in a stock market crash ✓
- A) Determining the number of apples in 5 baskets, each containing 10 apples
- A) Measuring the distance traveled by a car moving at a constant speed
- 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)

Hint: Consider scenarios involving gains and losses.

- A) Calculating the total loss in a stock market crash ✓
- A) Determining the number of apples in 5 baskets, each containing 10 apples
- A) Measuring the distance traveled by a car moving at a constant speed
- 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.

Hint: Calculate the total profit and total loss separately.

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

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.

Hint: Consider both the profit and the loss in your calculation.

The net profit is \$650.

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

Hint: Use the order of operations to simplify the expression.

- A) 24 ✓
- A) -24
- A) 12
- A) -12

The correct product is 24.

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

Hint: Use the order of operations to simplify the expression.

- A) 24 ✓
- A) -24
- A) 12
- 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:

Hint: Consider the properties of multiplication.

- A) True ✓**
- A) False
- A)
- A)

■ This statement is true.

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

Hint: Think about situations involving quantities and changes.

- A) Calculating the net change in temperature over a week ✓**
- A) Determining the total cost of items in a shopping cart
- A) Estimating the total distance traveled by a vehicle
- A) Calculating the net profit or loss in a business over a month ✓**

■ The correct scenario involves calculating net profit or loss.

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

Hint: Think about situations involving quantities and costs.

- A) Calculating the net change in temperature over a week ✓**
- A) Determining the total cost of items in a shopping cart
- A) Estimating the total distance traveled by a vehicle
- 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.

Hint: Think about real-world applications of integer multiplication.

| A scenario could involve calculating total expenses or profits.

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Hint: Consider real-life applications of integer multiplication.

| A scenario could involve calculating total expenses or profits.