# Multiplying Integers Worksheet

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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

**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

**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

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*Hint: Remember that integers are whole numbers.*

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**Explain the commutative property of multiplication using integers.**

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

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

**List the outcomes of multiplying the following pairs of integers:**

*Hint: Calculate each product carefully.*

1. a) 4 × -5

2. b) -6 × -2

3. c) 3 × 0

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**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

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

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- ◯ A) Associative Property
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- ◯ A) Multiplicative Identity

## 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

**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

**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) $(8 \times 2) \times 1 = 8 \times (2 \times 1)$

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**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.*

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## 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

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**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

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**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.*

**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.*

**Analyze the expression (-3) × (2 × -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

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## 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)

**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

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

*Hint: Think about situations involving quantities and costs.*

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☐ A) Determining the total cost of items in a shopping cart
☐ A) Estimating the total distance traveled by a vehicle
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**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.*

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*Hint: Consider real-life applications of integer multiplication.*