Adding And Subtracting Integers Worksheet

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Part 1: Building a Foundation

What is the result of adding two negative integers?

Hint: Consider the signs of the integers involved.

- ◯ A) Positive
- ◯ B) Negative
- ◯ C) Zero
- ◯ D) Undefined

Which of the following are integers?

Hint: Identify the whole numbers, including negatives.

- ☐ A) -3
- ☐ B) 0.5
- ☐ C) 7
- ☐ D) 2.5

Explain what an integer is and provide three examples.

Hint: Think about whole numbers and their negatives.

List the steps involved in subtractING one integer from another.

Hint: Think about the process of subtraction.

1. Step 1

2. Step 2

3. Step 3

What is the opposite of the integer -8?

Hint: Consider the definition of opposites in integers.

- ◯ A) 8
- ◯ B) -8
- ◯ C) 0
- ◯ D) 16

Part 2: Understanding and Interpretation

When adding a positive integer to a negative integer, what determines the sign of the result?

Hint: Think about the absolute values of the integers.

- ◯ A) The larger absolute value
- ◯ B) The smaller absolute value
- ◯ C) The number of digits
- ◯ D) The sum of the integers

Which of the following statements are true about the number line?

Hint: Consider the direction of movement on the number line.

- ☐ A) Moving right indicates addition.
- ☐ B) Moving left indicates subtraction.
- ☐ C) Zero is at the center.
- ☐ D) Negative numbers are to the right of zero.

Describe how you would use a number line to solve the equation 3 - 5.

Hint: Think about the movements on the number line.

Part 3: Application and Analysis

If the temperature is -2°C and it drops by 5°C, what is the new temperature?

Hint: Consider how temperature changes relate to integers.

- ◯ A) 3°C
- ◯ B) -3°C
- ◯ C) -7°C
- ◯ D) 7°C

Which of the following expressions result in a positive integer?

Hint: Evaluate each expression carefully.

- ☐ A) -4 + 6
- ☐ B) 5 - 8
- ☐ C) 3 + 2
- ☐ D) -7 + 10

A submarine is at a depth of 300 meters below sea level. It ascends 150 meters. What is its new position relative to sea level?

Hint: Think about how depth changes relate to integers.

Which of the following expressions is equivalent to 7 - (-3)?

Hint: Consider the rules of subtractING negative numbers.

- ◯ A) 7 + 3
- ◯ B) 7 - 3
- ◯ C) -7 + 3
- ◯ D) -7 - 3

Analyze the following statements and select those that correctly describe properties of integer operations:

Hint: Think about the properties of addition and subtraction.

- ☐ A) The sum of an integer and its opposite is zero.
- ☐ B) SubtractING an integer is the same as adding its opposite.
- ☐ C) The product of two negative integers is negative.
- ☐ D) Zero is the identity element for addition.

Explain why subtractING a negative integer is equivalent to adding a positive integer.

Hint: Consider the rules of integer operations.

Part 4: Evaluation and Creation

Which of the following scenarios correctly applies the concept of integer subtraction?

Hint: Think about real-life situations involving decreases.

- ◯ A) A bank account balance decreases by $50 after a deposit.
- ◯ B) A temperature increases by 10°C when it drops by 10°C.
- ◯ C) A mountain climber descends 200 meters and then ascends 200 meters, returning to the original height.
- ◯ D) A vehicle moves forward 10 meters and then reverses 10 meters, ending up 20 meters from the start.

Create an expression that represents the following scenario: A hiker starts at an elevation of 100 meters, climbs 50 meters, descends 30 meters, and then climbs another 20 meters.

Hint: Think about how to represent elevation changes mathematically.

- ☐ A) 100 + 50 - 30 + 20
- ☐ B) 100 - 50 + 30 - 20
- ☐ C) 100 + 50 + 30 + 20
- ☐ D) 100 - 50 - 30 + 20

Design a real-world problem involving the addition and subtraction of integers, and provide a solution.

Hint: Think about a scenario that includes both operations.