Subtracting Integers Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is the definition of an integer?

undefined. A) A fraction

undefined. B) A whole number that can be positive, negative, or zero ✓

undefined. C) A decimal number

undefined. D) A number with a square root

An integer is a whole number that can be positive, negative, or zero.

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

undefined. A) -3 ✓

undefined. B) 0 ✓

undefined. C) 2.5

undefined. D) 7 ✓

The integers are -3, 0, and 7.

Explain the rule for subtractING a negative integer from another integer.

SubtractING a negative integer is equivalent to adding its positive counterpart.

List the steps involved in subtractING integers using the number line.

1. Step 1

Identify the first integer.

2. Step 2

Locate the second integer.

3. Step 3

Move left for subtraction.

The steps include identifying the integers, locating them on the number line, and moving left or right based on the operation.

Part 2: Understanding and Interpretation

Which statement correctly describes the result of subtractING a larger positive integer from a smaller positive integer?

undefined. A) The result is always positive.

undefined. B) The result is always zero.

undefined. C) The result is always negative. ✓

undefined. D) The result is always a fraction.

The result is always negative.

When subtractING integers, which of the following statements are true? (Select all that apply)

undefined. A) SubtractING a positive integer is the same as adding a negative integer. ✓

undefined. B) SubtractING a negative integer is the same as adding a positive integer. ✓

undefined. C) SubtractING zero from any integer changes the integer.

undefined. D) SubtractING an integer from itself results in zero. ✓

The true statements include subtractING a positive integer is like adding a negative integer, and subtractING an integer from itself results in zero.

Describe how the number line can be used to solve the subtraction problem 5 - (-3).

You would start at 5 and move to the right 3 units, resulting in 8.

Part 3: Application and Analysis

What is the result of the subtraction -4 - 6?

undefined. A) 10

undefined. B) -10 ✓
undefined. C) 2
undefined. D) -2

The result is -10.

Which of the following problems involve subtractING a negative integer? (Select all that apply)

undefined. A) 8 - 5
undefined. B) 7 - (-2) ✓
undefined. C) -3 - 4
undefined. D) -6 - (-1) ✓

The problems that involve subtractING a negative integer are 7 - (-2) and -6 - (-1).

Solve the subtraction problem -9 - (-4) and explain your reasoning.

The result is -5 because subtractING -4 is the same as adding 4.

Part 4: Evaluation and Creation

If x - y = z, which of the following must be true?

undefined. A) x = y + z ✓
undefined. B) x = y - z
undefined. C) x = z - y
undefined. D) x = -y - z

The correct statement is x = y + z.

Analyze the following statements and identify which are correct regarding integer subtraction. (Select all that apply)

undefined. A) SubtractING a negative integer always results in a larger integer. ✓
undefined. B) SubtractING a positive integer always results in a smaller integer. ✓
undefined. C) The subtraction of two negative integers can result in a positive integer. ✓
undefined. D) SubtractING zero from any integer results in the same integer. ✓

The correct statements are A, B, C, and D.

Analyze the subtraction -5 - 7 and explain why the result is negative.

The result is negative because you are subtractING a larger positive integer from a smaller negative integer.

Which subtraction problem will result in the smallest integer?

undefined. A) 3 - 7

undefined. B) -2 - 5 ✓

undefined. C) -8 - (-3)

undefined. D) 0 - 6

The problem -8 - (-3) results in the smallest integer.

Evaluate the following scenarios and determine which involve a change in direction on the number line. (Select all that apply)

undefined. A) Moving from 5 to -3 ✓

undefined. B) Moving from -2 to 4 ✓

undefined. C) Moving from 0 to -5 ✓

undefined. D) Moving from -7 to -7

The scenarios that involve a change in direction are A, B, and C.

Create a real-world scenario where subtractING integers is necessary, and explain how you would solve it using the rules of integer subtraction.

An example could be tracking expenses where you subtract costs from your budget.