

Integers Worksheet

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Part 1: Foundational Knowledge

What is the definition of an integer?

Hint: Think about the characteristics of whole numbers.

- A) A number that includes fractions and decimals
- B) A whole number that can be positive, negative, or zero
- C) A number that is always positive
- D) A number that is always negative

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

Hint: Consider the fundamental properties of addition and multiplication.

- A) Closure

- B) Reflexive Property
- C) Commutative Property
- D) Associative Property

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

Hint: Consider the fundamental properties of integers.

- A) Closure
- B) Reflexivity
- C) Commutative Property
- D) Associative Property

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

Hint: Consider the fundamental properties of integer operations.

- A) Closure
- B) Reflexivity
- C) Commutative Property
- D) Associative Property

Explain the commutative property of addition in your own words.

Hint: Think about how changing the order of numbers affects the sum.

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On a number line, which direction do you move to find a greater integer?

Hint: Think about the arrangement of numbers on the line.

- A) Left
- B) Right
- C) Up
- D) Down

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Part 2: Understanding and Interpretation

Which of the following statements are true about the number line? (Select all that apply)

Hint: Consider the properties of the number line.

- A) Zero is the neutral point.
- B) Numbers to the left are greater.
- C) Numbers to the right are greater.
- D) It only includes positive numbers.

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Describe how you would use the number line to compare the integers -5 and 3.

Hint: Think about their positions on the number line.

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What is the absolute value of -7?

Hint: Consider the distance from zero on the number line.

- A) -7
- B) 0
- C) 7
- D) 14

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Part 3: Applying Knowledge

Apply the distributive property to simplify the expression: $3(4 + 5)$.

Hint: Think about how to distribute the 3 across the terms in the parentheses.

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If you subtract -4 from 7, what is the result?

Hint: Remember that subtracting a negative is the same as adding.

- A) 3
- B) 11
- C) -11
- D) -3

If you subtract -4 from 7, what is the result?

Hint: Think about how subtracting a negative number affects the result.

- A) 3
- B) 11
- C) -11
- D) -3

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- B) 11
- C) -11
- D) -3

Which of the following operations will result in a positive integer? (Select all that apply)

Hint: Consider the effects of each operation on the integers involved.

- A) $-2 * -3$

- B) $5 + (-5)$
- C) $6 - (-2)$
- D) $-7 + 7$

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Part 4: Analyzing Relationships

Analyze the expression $2(-3 + 4)$ and explain each step to find the result.

Hint: Break down the expression into manageable parts.

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Which property is illustrated by the equation $6 + (4 + 2) = (6 + 4) + 2$?

Hint: Consider the grouping of numbers in addition.

- A) Commutative Property
- B) Associative Property
- C) Distributive Property
- D) Closure Property

Which property is illustrated by the equation $6 + (4 + 2) = (6 + 4) + 2$?

Hint: Consider the properties of addition.

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- B) Associative Property

- C) Distributive Property
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Part 5: Synthesis and Reflection

Evaluate the expression $-8 + 3 * (2 - 5)$ and explain your reasoning.

Hint: Break down the expression step by step.

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Hint: Consider the order of operations when evaluating.

Evaluate the expression $-8 + 3 * (2 - 5)$ and explain your reasoning.

Hint: Follow the order of operations carefully.

Which of the following scenarios best illustrates the use of integers in real life? (Select all that apply)

Hint: Think about situations where positive and negative values are used.

- A) Calculating temperature changes
- B) Measuring the height of a building
- C) Tracking bank account balances
- D) Determining the speed of a car

Which of the following scenarios best illustrates the use of integers in real life? (Select all that apply)

Hint: Consider practical applications of integers.

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- B) Measuring the height of a building
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Create a real-world problem that involves adding and subtracting integers, and solve it.

Hint: Think about a scenario that includes both positive and negative values.

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