

Integers Worksheet Answer Key PDF

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Part 1: Foundational Knowledge

What is the definition of an integer?

undefined. A) A number that includes fractions and decimals

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

undefined. C) A number that is always positive

undefined. D) A number that is always negative

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

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

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

- undefined. A) Closure ✓
- undefined. B) Reflexive Property ✓
- undefined. C) Commutative Property ✓
- undefined. D) Associative Property ✓

The properties of integers include closure, reflexivity, commutativity, and associativity.

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Explain the commutative property of addition in your own words.

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

undefined. A) Left

undefined. B) Right ✓

undefined. C) Up

undefined. D) Down

To find a greater integer, you move to the right on the number line.

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Part 2: Understanding and Interpretation

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

undefined. A) Zero is the neutral point. ✓

undefined. B) Numbers to the left are greater.

undefined. C) Numbers to the right are greater. ✓

undefined. D) It only includes positive numbers.

True statements about the number line include that zero is the neutral point and numbers to the right are greater.

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True statements about the number line include that zero is the neutral point and numbers to the right are greater.

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

To compare -5 and 3 on the number line, you would see that -5 is to the left of 0 and 3 is to the right, indicating that 3 is greater than -5.

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What is the absolute value of -7?

undefined. A) -7

undefined. B) 0

undefined. C) 7 ✓

undefined. D) 14

The absolute value of -7 is 7, as it represents the distance from zero.

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undefined. D) 14

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Part 3: Applying Knowledge

Apply the distributive property to simplify the expression: $3(4 + 5)$.**Using the distributive property, $3(4 + 5)$ simplifies to $3 \cdot 4 + 3 \cdot 5 = 12 + 15 = 27$.****Apply the distributive property to simplify the expression: $3(4 + 5)$.**

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

undefined. A) 3

undefined. B) 11 ✓

undefined. C) -11

undefined. D) -3

Subtracting -4 from 7 gives you $7 + 4 = 11$.

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undefined. D) -3

Subtracting -4 from 7 results in 11, as subtracting a negative is equivalent to adding.

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Subtracting -4 from 7 results in 11, as it is equivalent to $7 + 4$.

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

undefined. A) $-2 \cdot -3$ ✓

undefined. B) $5 + (-5)$

undefined. C) $6 - (-2)$ ✓

undefined. D) $-7 + 7$

The operations that result in a positive integer include multiplying two negative integers and adding a positive integer to a negative integer.

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

undefined. A) $-2 * -3$ ✓

undefined. B) $5 + (-5)$

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undefined. D) $-7 + 7$

The operations that result in a positive integer include $-2 * -3$ and $6 - (-2)$.

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

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The operations that result in a positive integer include multiplying two negative integers and adding a positive integer to a negative integer.

Part 4: Analyzing Relationships

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

To analyze $2(-3 + 4)$, first calculate $-3 + 4 = 1$, then multiply by 2 to get $2 * 1 = 2$.

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

undefined. A) Commutative Property

undefined. **B) Associative Property ✓**

undefined. C) Distributive Property

undefined. D) Closure Property

The equation illustrates the Associative Property, which states that the way numbers are grouped does not change the sum.

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The equation illustrates the Associative Property of addition.

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The equation illustrates the Associative Property of addition.

Part 5: Synthesis and Reflection

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

To evaluate $-8 + 3 * (2 - 5)$, first calculate $(2 - 5) = -3$, then multiply by 3 to get -9, and finally add -8 to get -17.

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

Evaluating $-8 + 3 * (2 - 5)$ gives $-8 + 3 * -3 = -8 - 9 = -17$.

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

undefined. A) Calculating temperature changes ✓

undefined. B) Measuring the height of a building

undefined. C) Tracking bank account balances ✓

undefined. D) Determining the speed of a car ✓

Scenarios that illustrate the use of integers include calculating temperature changes, tracking bank account balances, and determining the speed of a car.

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Scenarios that illustrate the use of integers include calculating temperature changes and tracking bank account balances.

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

undefined. A) Calculating temperature changes ✓

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Scenarios that illustrate the use of integers include calculating temperature changes and tracking bank account balances.

Create a real-world problem that involves adding and subtracting integers, and solve it.

An example problem could be: 'You have \$20, and you spend \$15, then earn \$10. How much do you have now?' The solution is $\$20 - \$15 + \$10 = \15 .

Create a real-world problem that involves adding and subtracting integers, and solve it.

An example problem could be: If you have \$20 and spend \$15, how much do you have left? The solution is \$5.

Create a real-world problem that involves adding and subtracting integers, and solve it.

An example problem could involve tracking expenses and income, such as spending \$20 and earning \$50, resulting in a net gain of \$30.