

Absolute Value Quiz PDF

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Discuss the significance of absolute value in mathematical problem-solving and its impact on understanding distances.

If $|x| = 10$, what are the possible values of x ?

- 10 only
- 10 only
- 0 and 10
- 10 and -10

What is the result of $|0|$?

- 0
- 1
- 1
- Undefined

The graph of $y = |x|$ is shaped like a:

- Line
- Circle
- V
- Parabola

Provide a step-by-step solution to the equation $|x + 2| = 8$.

What is the absolute value of -7?

- 7
- 0
- 7
- 14

Which of the following represents the absolute value of a number x ?

- x^2
- $-x$
- $|x|$
- $1/x$

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

- $|x| \geq 0$
- $|x| = x$ if $x \geq 0$
- $|x| = -x$ if $x < 0$
- $|x| = x^2$

Which of the following is always true for any real number x ?

- $|x| < 0$
- $|x| = x$
- $|x| \geq 0$
- $|x| = -x$

What is the absolute value of the expression $|3 - 5|$?

- 2
- 2
- 8
- 0

Which of the following inequalities are equivalent to $|x| < 3$? (Select all that apply)

- $-3 < x < 3$
- $x < 3$
- $x > -3$
- $x = 3$

What are the solutions to the equation $|x - 4| = 6$? (Select all that apply)

- $x = 10$
- $x = -2$
- $x = 4$
- $x = 6$

Solve the inequality $|2x - 3| > 5$ and explain your solution process.

How does the graph of $y = |x|$ differ from the graph of $y = x$?

Explain in your own words what the absolute value of a number represents.

Which equation represents the condition where x is 5 units away from 0?

- $x = 5$
- $|x| = 5$
- $x = -5$
- $|x| = 0$

In which situations would you use absolute value? (Select all that apply)

- Calculating distances
- Determining direction
- Measuring magnitudes
- Solving quadratic equations

Which of the following statements about absolute value are true? (Select all that apply)

- $|x + y| = |x| + |y|$
- $|xy| = |x| * |y|$
- $|x/y| = |x| / |y|$ for $y \neq 0$
- $|x - y| = |y - x|$

Which of the following expressions are equal to $|x|$? (Select all that apply)

- $\sqrt{x^2}$
- x if $x \geq 0$
- $-x$ if $x < 0$
- x^2

Describe a real-world scenario where absolute value is used and explain why it is important in that context.

