Inequalities Quiz Answer Key PDF

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Which of the following are symbols used in inequalities? (Select all that apply)

A. > ✓

B. < ✓

C. =

D. ≥ ✓

E. ≠

Which of the following is a linear inequality?

A. $x^2 + 3x - 4 > 0$

B. $2x + 5 < 10$ ✓

C. $x^3 - 2x + 1 \leq 0$

D. $|x - 1| > 3$

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

A. Linear ✓

B. Quadratic ✓

C. Polynomial ✓

D. Exponential

Which of the following inequalities have solutions that include x = 3? (Select all that apply)

A. $x > 2$ ✓

B. $x < 3$

C. $x \geq 3$ ✓

D. $x \leq 3$ ✓

What type of inequality is represented by |x - 3| ≤ 5?

A. Linear
B. Quadratic
C. Absolute value ✓
D. Rational

Which of the following is NOT a solution to the inequality x < 4?

A. 3
B. 0
C. 5 ✓
D. -1

Which of the following are methods to solve inequalities? (Select all that apply)

A. Graphting ✓
B. Substitution
C. Addition or subtraction ✓
D. Multiplication or division ✓

In the inequality 3x - 7 > 2, what is the first step to isolate x?

A. Add 7 to both sides ✓
B. Subtract 7 from both sides
C. Divide both sides by 3
D. Multiply both sides by 3

What does the solution x ≥ 2 look like on a number line?

A. Open circle at 2, shading to the right
B. Closed circle at 2, shading to the right ✓
C. Open circle at 2, shading to the left
D. Closed circle at 2, shading to the left

What symbol is used to represent "greater than"?

A. <
B. > ✓
C. ≤
D. ≥

What happens to the inequality sign when you multiply or divide both sides by a negative number?

A. It stays the same
B. It reverses ✓
C. It becomes an equation
D. It disappears

Which notation is used to represent the solution set of an inequality on a number line?

A. Interval notation ✓
B. Set-builder notation
C. Equation notation
D. Function notation

Which statements are true about compound inequalities? (Select all that apply)

A. They always have "and" between them
B. They can be solved separately ✓
C. They may use "or" to combine solutions ✓
D. They represent a single inequality

What are common mistakes when solving inequalities? (Select all that apply)

A. Forgetting to reverse the inequality sign when multiplying by a negative ✓
B. Misplacing decimal points
C. Incorrectly graphng the solution ✓
D. Solving as if it were an equation ✓