Grade 7

Topic: Solving Inequalities Using Addition or Subtraction

Instructions

Solve each inequality. Show all steps and graph the solution on a number line.

Practice Problems

1. **Solve the following inequalities.**

   (i) $x + 5 \leq 12$

   (ii) $x - 3 > 7$

   (iii) $m + 8 \geq 15$

   (iv) $p - 4 < 10$

   (v) $y + 6 > 9$

   (vi) $z - 2 \leq 5$

2. **Solve and graph the inequalities.**

   (i) $n + 4 > 10$

   (ii) $q - 5 \leq 2$

   (iii) $r + 7 < 14$

   (iv) $s - 6 \geq 0$

3. **Word Problems.**

   (i) A number plus 7 is at most 12. Find the number.

   (ii) A number minus 5 is greater than 9. Find the number.

   (iii) The sum of a number and 6 is at least 15. Find the number.

   (iv) A number decreased by 4 is less than 8. Find the number.

Multiple-Choice Questions

1. Solve: $x + 3 \leq 10$

   A. $x \leq 7$
   B. $x \geq 7$
   C. $x \leq 13$
   D. $x \geq 13$

2. Solve: $x - 2 > 5$

   A. $x > 3$
   B. $x < 3$
   C. $x > 7$
   D. $x < 7$

3. Which inequality has solution $x < 4$?

   A. $x + 1 < 5$
   B. $x - 2 \geq 2$
   C. $x + 3 > 7$
   D. $x - 1 \leq 2$

4. Solve: $m + 6 \geq 10$

   A. $m \geq 16$
   B. $m \leq 16$
   C. $m \geq 4$
   D. $m \leq 4$

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