

## Section 4-8: Finding and Graphing the Solution of an Equality

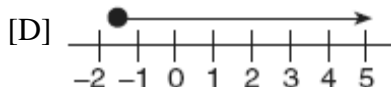
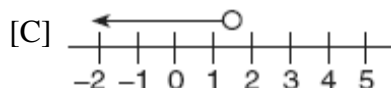
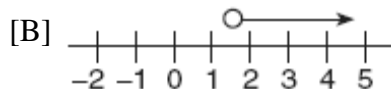
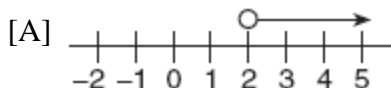
1. fall0704ia, P.I. A.A.29

Which interval notation represents the set of all numbers from 2 through 7, inclusive?

[A]  $[2,7]$  [B]  $(2,7)$  [C]  $(2,7)$  [D]  $[2,7)$

2. 060616a, P.I. 8.G.19

Which graph best represents the solution set for the inequality  $x > \sqrt{2}$ ?



3. 060118a, P.I. A.A.24

In the set of positive integers, what is the solution set of the inequality  $2x - 3 < 5$ ?

[A]  $\{0, 1, 2, 3, 4\}$  [B]  $\{1, 2, 3\}$   
[C]  $\{0, 1, 2, 3\}$  [D]  $\{1, 2, 3, 4\}$

4. 060311a, P.I. A.A.21

Which number is in the solution set of the inequality  $5x + 3 > 38$ ?

[A] 7 [B] 6 [C] 5 [D] 8

5. fall0724ia, P.I. A.A.21

Which value of  $x$  is in the solution set of the inequality  $-2x + 5 > 17$ ?

[A] -6 [B] 12 [C] -8 [D] -4

6. 010536a, P.I. A.A.24

Find all negative odd integers that satisfy the following inequality:  $-3x + 1 \leq 17$

## Graphing the Intersection of Two Sets

7. 060001a, P.I. 8.G.19

Which inequality is represented in the graph below?



[A]  $-4 \leq x \leq 2$  [B]  $-4 < x \leq 2$   
[C]  $-4 < x < 2$  [D]  $-4 \leq x < 2$

8. 080411a, P.I. 8.G.19

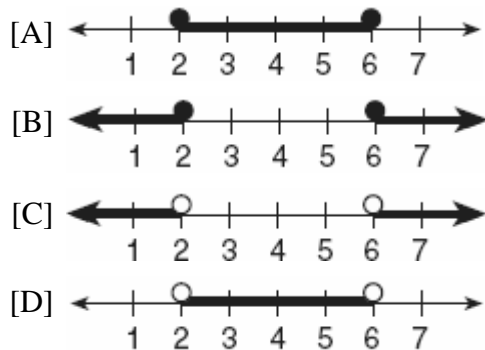
Which inequality is represented in the accompanying graph?



- [A]  $-3 \leq x < 4$       [B]  $-3 \leq x \leq 4$   
[C]  $-3 < x \leq 4$       [D]  $-3 < x < 4$

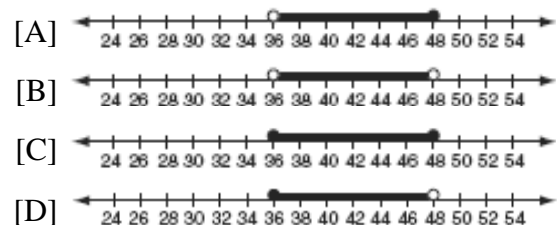
9. 010312a, P.I. 8.A.13

Which graph represents the solution set for  $2x - 4 \leq 8$  and  $x + 5 \geq 7$ ?



10. 010610a, P.I. 8.G.19

In order to be admitted for a certain ride at an amusement park, a child must be greater than or equal to 36 inches tall and less than 48 inches tall. Which graph represents these conditions?



11. 060532a, P.I. 8.G.19

The manufacturer of Ron's car recommends that the tire pressure be at least 26 pounds per square inch and less than 35 pounds per square inch. On the accompanying number line, graph the inequality that represents the recommended tire pressure.



[1] A

[2] B

[3] B

[4] D

[5] C

[3] -5, -3, -1, and appropriate work is shown, such as solving the inequality or trial and error with at least three trials and appropriate checks.

[2] Appropriate work is shown, but one computational error is made.

or [2] Appropriate work is shown, and the inequality  $x \geq -5\frac{1}{3}$  is written, but no further

correct work is shown.

or [2] The trial-and-error method is used to find the correct solutions, but only two trials and appropriate checks are shown.

[1] Appropriate work is shown, but two or more computational errors are made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] The trial-and-error method is attempted and at least six systematic trials and appropriate checks are shown, but the solutions are not found.

or [1] -5, -3, -1, but no work or only one trial with an appropriate check is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[6] incorrect procedure.

[7] D

[8] C

[9] A

[10] D

[2] A correct graph is drawn on the number line, with a closed circle at the left end and an open circle at the right end.

[1] Appropriate work is shown, but one graphing error is made, such as writing an incorrect scale on the number line.

or [1] Appropriate work is shown, but one conceptual error is made, such as using a closed circle instead of an open circle.

or [1] A correct inequality is written, but the graph is not drawn.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[11] incorrect procedure.