

A.A.21: Determine whether a given value is a solution to a given linear equation in one variable or linear inequality in one variable.

1. 060311a, P.I. A.A.21

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

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

2. 060914ia, P.I. A.A.21

Which value of x is in the solution set of

$$\frac{4}{3}x + 5 < 17?$$

[A] 16 [B] 9 [C] 12 [D] 8

3. fall0724ia, P.I. A.A.21

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

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

4. 080805ia, P.I. A.A.21

Which value of x is in the solution set of the inequality $-4x + 2 > 10$?

[A] -4 [B] 3 [C] 2 [D] -2

5. 080913ia, P.I. A.A.21

Which value of x is in the solution set of the inequality $-2(x - 5) < 4$?

[A] 0 [B] 2 [C] 5 [D] 3

6. 060118a, P.I. A.A.21

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

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

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

7. 010536a, P.I. A.A.21

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

[1] C _____

[2] D _____

[3] C _____

[4] A _____

[5] C _____

[6] D _____

[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

[7] incorrect procedure.