

Chapter 4 Practice Test

1

The sum of $120k$ and $215j$ does not exceed 2,500.

Which of the following inequalities represents the statement above?

- A) $120k + 215j < 2,500$
- B) $120k + 215j > 2,500$
- C) $120k + 215j \leq 2,500$
- D) $120k + 215j \geq 2,500$

2

One half of a number decreased by 3 is at most -5 .

Which of the following inequalities represents the statement above?

- A) $\frac{1}{2}n - 3 \leq -5$
- B) $3 - \frac{1}{2}n \leq -5$
- C) $\frac{1}{2}n - 3 < -5$
- D) $3 - \frac{1}{2}n < -5$

3

Which of the following numbers is NOT a solution to the inequality $\frac{3b+5}{-2} \geq b-8$?

- A) 0
- B) 1
- C) 2
- D) 3

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Which of the following inequalities is equivalent to $0.6(k-7) - 0.3k > 1.8 + 0.9k$?

- A) $k < 10$
- B) $k < -10$
- C) $k > 10$
- D) $k > -10$

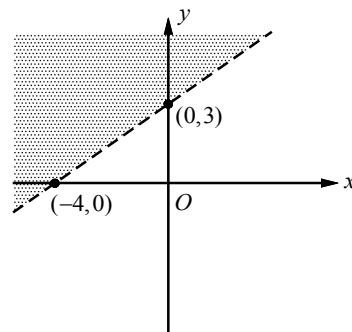
5

$4m - 3 \leq 2(m+1)$ or $7m + 23 < 15 + 9m$

Which of the following numbers is a solution to the compound inequality above?

- A) 2
- B) 3
- C) 4
- D) 5

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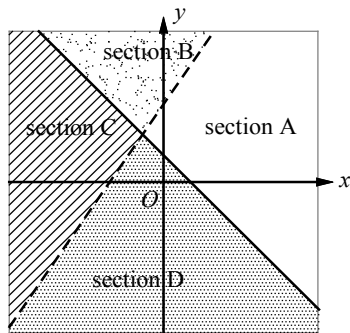


Which of the following inequalities represents the graph above?

- A) $4y - 3x > 12$
- B) $4y - 3x < 12$
- C) $3y - 4x > 12$
- D) $3y - 4x < 12$

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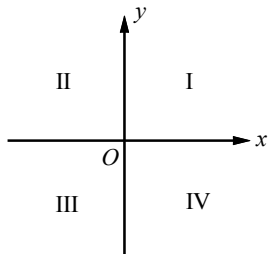
$$\begin{cases} 2y - 3x \leq 6 \\ y > 1 - x \end{cases}$$



A system of inequalities and a graph are shown above. Which section or sections of the graph could represent all of the solutions to the system?

- A) Section A
- B) Section B
- C) Section C
- D) Section D

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If the system of inequalities $3 \geq x$ and $-1 \leq y$ is graphed in the xy -plane above, which quadrant contains no solutions to the system?

- A) Quadrant II
- B) Quadrant III
- C) Quadrant IV
- D) All four quadrants contain solutions.

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$$\begin{cases} y < ax + 1 \\ y > bx - 1 \end{cases}$$

In the xy -plane, if $(1, 0)$ is a solution to the system of inequalities above, which of the following must be true?

- I. $a > -1$
 - II. $a + b = 0$
 - III. $b < 1$
- A) I only
 - B) I and II only
 - C) I and III only
 - D) I, II, and III

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$$\begin{cases} y \geq 12x + 600 \\ y \geq -6x + 330 \end{cases}$$

In the xy -plane, if (x, y) lies in the solution set of the system of inequalities above, what is the minimum possible value of y ?

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If $-6 \leq 3 - 2x \leq 9$, what is the greatest possible value of $x - 1$?

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For what integer value of x is $4x - 2 > 17$ and $3x + 5 < 24$?