

Solving System of Inequalities

Name _____

Class _____

Date _____

A N S W E R S

1a

1b

2a

2b

3a

3b

4a

4b

Solve the system of inequalities.

1. a.
$$\begin{cases} 3-6x > 12 \\ 6x+5 < 4 \end{cases}$$

b.
$$\begin{cases} 3+5x > 1 \\ 6-3x < 10 \end{cases}$$

2. a.
$$\begin{cases} 3x+7 < 19 \\ 2-5x < 2 \end{cases}$$

b.
$$\begin{cases} 4-x > 4 \\ 2x+15 > 9 \end{cases}$$

3. a.
$$\begin{cases} 11x+2 \geq -2 \\ 3-3x \geq -5 \end{cases}$$

b.
$$\begin{cases} 4x-3 \leq -5 \\ 2+9x \leq -1 \end{cases}$$

4. a.
$$\begin{cases} (5+a) > -2(a-1) \\ 3(2-a) < 3a+4 \end{cases}$$

b.
$$\begin{cases} -2(5-a) \geq 7a \\ 14-2a \geq -6(a+1) \end{cases}$$

A

SIMULTANEOUS INEQUALITIES

Name _____

Class _____

Date _____

ANSWERS

1a

1b

2a

2b

3a

3b

4a

4b

Solve the following system of inequalities.

$$1. \quad \text{a.} \quad \begin{cases} \frac{x-1}{4} - x - 2 \leq \frac{x+1}{2} - \frac{x}{2} \\ 0,5x < 2 - x \end{cases}$$

$$\text{b.} \quad \begin{cases} 2 - \frac{x-1}{4} \leq \frac{x+1}{2} - x + \frac{x+4}{3} \\ x > \frac{3}{2}x - 2,5x \end{cases}$$

$$2. \quad \text{a.} \quad \begin{cases} x < \frac{5x-4}{2} - (x-1) \\ -10 - x < \frac{4x-1}{3} \end{cases}$$

$$\text{b.} \quad \begin{cases} 10 - 4x > \frac{x}{3} + 1 \\ 4 + x < x - \frac{2x-1}{3} \end{cases}$$

$$3. \quad \text{a.} \quad \begin{cases} 3(4x+1) + 16 > 2(3x-1) \\ 3x+8 > 4(2+x) \end{cases}$$

$$\text{b.} \quad \begin{cases} 6x(x-1) - 3x(2x-1) \leq x \\ 0,5x - 3,7 < 0,2x - 0,7 \end{cases}$$

$$4. \quad \text{a.} \quad \begin{cases} 5(x+1) + 6(x+2) > 9(x+3) \\ 7x - 3(2x+3) > 2(x-18) \end{cases}$$

$$\text{b.} \quad \begin{cases} (x-3)(x-4) < (x+1)(x+2) \\ x(x+1) + x(x+2) > (2x-1)(x+3) \end{cases}$$

B