"I Can Write an Inequality and Determine the Possible Solutions that Satisfy the Situation."

An Introduction to Writing Inequalities

List three numbers that would be in the solution set inequalities below.

x **is greater than** 14	x **is less than** 8	x **is greater than or equal to** 50	x **is less than or equal to** 1
$x > 14$	$x < 8$	$x \geq 50$	$x \leq 1$

Key Words	**Key Words**	**Key Words**	**Key Words**
Is Greater Than Is More Than Is Larger Than Exceeds	Is Less Than Is Smaller Than Is Below	Is Greater Than or Equal To At Least No Less Than	Is Less Than or Equal To At Most No More Than

Look at the situations below. Circle the numbers that are possible answers in each situation. Then write an inequality for each situation.

1. Jessica spent less than $5 at the arcade.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Inequality: _____

2. Sherry must get at least 8 points to win the game.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Inequality: _____

3. You must be older than 10 to play in the basketball game.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Inequality: _____

4. Billy's mom told him to spend no more than 12 minutes playing video games.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Inequality: _____

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x **is greater than** 14	x **is less than** 8	x **is greater than or equal to** 50	x **is less than or equal to** 1
$x > 14$	$x < 8$	$x \geq 50$	$x \leq 1$
$X = \{17, 20, 25\}$	$X = \{0, 4, 7\}$	$X = \{55, 100, 150\}$	$X = \{0, -5, -7\}$
Key Words Is Greater Than Is More Than Is Larger Than Exceeds	**Key Words** Is Less Than Is Smaller Than Is Below	**Key Words** Is Greater Than or Equal To *At Least* *No Less Than*	**Key Words** Is Less Than or Equal To *At Most* *No More Than*

Look at the situations below. Circle the numbers that are possible answers in each situation. Then write an inequality for each situation.

1. Jessica spent less than $5 at the arcade.

(1) (2) (3) (4) 5 6 7 8 9 10 11 12 13 14 15

Inequality: $d < 5$

2. Sherry must get at least 8 points to win the game.

1 2 3 4 5 6 7 (8) (9) (10) (11) (12) (13) (14) (15)

Inequality: $p \geq 8$

3. You must be older than 10 to play in the basketball game.

1 2 3 4 5 6 7 8 9 10 (11) (12) (13) (14) (15)

Inequality: $b > 10$

4. Billy's mom told him to spend no more than 12 minutes playing video games.

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) 13 14 15

Inequality: $m \leq 12$