Name_____ Date_____ Period_____

LESSON 8-4 · SESSION 1 · PRACTICE · FORM B

Writing Inequalities

Learning target – I can write an inequality that describes a constraint in a real situation. · 6.EE.B.8

REMEMBER

- **At least** = that number or more (≥). **More than** = greater, not equal (>).
- **At most**, **no more than**, **maximum** = that number or less (≤). **Less than**, **fewer than** = <.
- Ask: is the boundary number **allowed**? Then choose the symbol.

WORKED EXAMPLE

A van can carry at most 8 riders. Write an inequality for *r*, the riders.

Step 1 Key words: "at most." Is 8 allowed? Yes.

Step 2 "At most" means less than or equal to: $r \leq 8$.

Step 3 Test: 8 works, 5 works, 9 does not.

Answer $r \leq 8$

WORDS **inequality** *(desigualdad)* · **at least** *(al menos)* · **constraint** *(restricción)*

PRACTICE

show your work · label units

1. Write an inequality for each phrase. Use *x*.

a. at least 21 ____

b. at most 6 ____

c. more than 40 ____

d. fewer than 10 ____

e. no more than 50 ____

f. a minimum of 3 ____

2. Write an inequality for each rule. Use the variable given.

Rule	Inequality
A rider must be taller than 48 inches. (*h*)	
A tent holds at most 6 campers. (*c*)	
A club needs at least 10 members. (*m*)	
A ride lasts less than 5 minutes. (*t*)	

3. **Ticket Sales Goal.** A club meets its goal when it sells at least 200 tickets. Write an inequality for *t*. Name two solutions.

Hint *"At least" lets 200 count.*

Answer_____

4. **Phone Storage.** A game needs more than 12 GB of free space. Write an inequality for g. Does exactly 12 GB work?

Hint *Is 12 itself allowed?*

Show your work.

Answer_____

5. **Trip Chaperones.** Every bus needs at least 5 chaperones. One bus has 4. Write an inequality for c. Does this bus meet the rule?

Show your work.

Answer_____

6. **Uniform Order.** A team gets a bulk price when it orders at least 30 shirts. Write an inequality for s. Name two solutions.

Hint *Decide whether 30 counts before you pick a symbol.*

Answer_____

7. **Read It Back.** An elevator sign reads "Maximum 15 passengers."

Hint *"Maximum" means at most.*

a. Write an inequality for p, the passengers. _____

b. Are 15 passengers allowed? Explain. _____

8. **Ride Rules.** Riders must be at least 44 inches tall and no taller than 78 inches. Let h = height in inches.

a. Write an inequality for the lower limit. _____

b. Write an inequality for the upper limit. _____

c. Name two heights that fit both rules and one that does not. _____

FIND THE ERROR

explain the mistake, then fix it

9. **Jaden's Work.** A class wins a prize when it collects more than 300 cans. Jaden wrote $c \geq 300$ for the winning totals. Explain his mistake. Write the correct inequality.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. "More than 30" is written —

A $x < 30$ **B** $x \leq 30$ **C** $x \geq 30$ **D** $x > 30$

11. "No more than 9" is written —

A $x \leq 9$ **B** $x < 9$ **C** $x \geq 9$ **D** $x > 9$

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

$t \geq 200$	$c \geq 5$	$p < 15$	$s \geq 30$	$g \geq 12$	$g > 12$	$p \leq 15$	$h \geq 44$	$c > 5$	$t > 200$
L	**M**	**X**	**I**	**Z**	**I**	**T**	**S**	**J**	**Q**

#3	#4	#5	#6	#7a	#8a

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___