LESSON MAKER PRO

Inequality Line-Up

Turn everyday limits into inequalities and graphs.

GRADE 6 · MA.6.AR.1.2

MA.6.AR.1.2 "Translate a real-world written description into an algebraic inequality in the form of x > a, x < a, x ≥ a or x ≤ a. Represent the inequality on a number line."

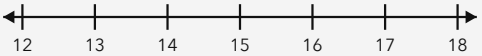
NAME _____ DATE _____

READ THE LIMIT

Words tell whether the boundary is included. More than uses >, fewer than uses <, at least uses ≥, and at most uses ≤. On a number line, use an open circle when the boundary is not included and a closed circle when it is included.

WORKED EXAMPLE

A theater sells student tickets to people age 15 or older. Let x be a person's age. Write and graph an inequality.



1. Let x represent a person's age.
2. "15 or older" means at least 15.
3. Write x ≥ 15.
4. Put a closed circle at 15 and shade right.

Answer: x ≥ 15; closed circle at 15, shade right.

PRACTICE 4 problems

1 Use the number line shown. A player may carry fewer than 8 energy packs. Let x be the number of packs. Write and graph an inequality.



ANSWER _____

2 Use the number line shown. A game is for players age 20 or older. Let x be a player's age. Write and graph an inequality.



ANSWER _____

3 A water bottle holds no more than 6 cups. Let x be the number of cups. Write and describe the graph.

ANSWER _____

4 A club needs more than 25 members to hold an election. Let x be the number of members. Write and describe the graph.

ANSWER _____

APPLY IT Show your work

1 An arcade prize costs 22 tickets. Maya has x tickets and wants enough for the prize. Write and graph an inequality.

WORK SPACE

ANSWER _____

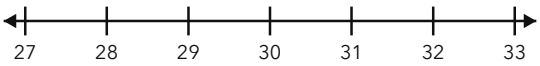
2 A music app download needs more than 9 GB of free storage. Let x be the free storage in GB. Write and graph an inequality.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A video contest accepts videos that are at most 30 seconds long. Let x be the video length in seconds. Write and graph an inequality. Explain why the circle at 30 is closed.



WORK SPACE AND ANSWER

ANSWER KEY

Inequality Line-Up

GRADE 6 · MA.6.AR.1.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the number line shown. A player may carry fewer than 8 energy packs. Let x be the number of packs. Write and graph an inequality.	**x < 8; open circle at 8, shade left.**
2	Use the number line shown. A game is for players age 20 or older. Let x be a player's age. Write and graph an inequality.	**x ≥ 20; closed circle at 20, shade right.**
3	A water bottle holds no more than 6 cups. Let x be the number of cups. Write and describe the graph.	**x ≤ 6; closed circle at 6, shade left.**
4	A club needs more than 25 members to hold an election. Let x be the number of members. Write and describe the graph.	**x > 25; open circle at 25, shade right.**

PART 2 · APPLY IT

1. **x ≥ 22; closed circle at 22, shade right.** Having enough tickets means Maya can have 22 tickets or more.
2. **x > 9; open circle at 9, shade right.** More than 9 does not include exactly 9.

CHALLENGE

x ≤ 30; closed circle at 30, shade left. The circle is closed because a video that is exactly 30 seconds is accepted.

Accept equivalent inequality wording and any correct graph with the proper open or closed circle and shading direction. Students may draw arrows instead of writing "shade left" or "shade right."