



Ride Height Inequalities

Mission: Every ride has a height sign. Graph each rule on a number line, then check which friends can ride. The graph shows ALL the heights that work, not just one answer.

Big question: How do inequalities show all the values that make a statement true?

★ Warm-up: True or false?

Decide and explain.

$48 \geq 48$ ✓ **True.**

$44 > 44$ ✓ **False.**

Key vocabulary

Inequality	A statement using $<$, $>$, $\leq$, or $\geq$.
$\geq$	Greater than or equal to ("at least").
$\leq$	Less than or equal to ("at most").
Solution set	All the values that make the inequality true.

1 Box 1

Check riders

In the simulator: Check all 6 riders for the Thunder Coaster.

Who can ride Thunder Coaster?

Choose all that apply.

☐ Ava (50) ☐ Ben (48) ☐ Cam (41) ☐ Eli (46)

✓ **Ava (50); Ben (48)**

2 Box 2

Kiddie Carousel

In the simulator: Graph $h \leq 42$ for the Kiddie Carousel.

Which way is the graph shaded, and why?

☐ Left: smaller heights are allowed ☐ Right ☐ Both ways

✓ **Left: smaller heights are allowed**

3 Box 3

Bumper Boats

In the simulator: Graph $h > 44$ for the Bumper Boats.

Dee is exactly 44 inches. Can Dee ride the Bumper Boats?

☐ No: 44 is not greater than 44 (open circle) ☐ Yes ☐ Only with a parent

✓ **No: 44 is not greater than 44 (open circle)**

4 Box 4

Match the words

Match each sign to its inequality.

Sort: At least 50 inches · Under 50 inches · No taller than 50 inches · Taller than 50 inches

$h \geq 50$	$h < 50$	$h \leq 50$	$h > 50$
At least 50 inches	Under 50 inches	No taller than 50 inches	Taller than 50 inches

5 Box 5

Legend: two rules Legend only

The Go-Karts need $44 < h \leq 50$. Who can ride? (Ava 50, Ben 48, Dee 44, Eli 46)

☐ Ava, Ben, and Eli ☐ Everyone ☐ Only Ben and Eli ☐ Dee only

✓ **Ava, Ben, and Eli**

6 Box 6

Explain the circles

Explain when to use an open circle and when to use a closed circle.

Look for: Explains open; Explains closed; Connects to "equal to"

Exit ticket: answer the big question in your own words

How do inequalities show all the values that make a statement true?

Look for: An inequality like $h \geq 48$ has many solutions. On a number line, a closed circle means the number is included ($\geq$ or $\leq$); an open circle means it is not included ($>$ or $<$). Shade toward the numbers that work.

Completion codes

Students see a code like **ABC-I3** when they finish. The first part must match below. The letter is the level (E = Explorer, I = Investigator, L = Legend), and the number at the end is how many stars they earned.

Level	Code starts with
 Explorer	5BG-E
 Investigator	JBW-I
 Legend	12N-L

Watch for these misconceptions

- "3x means $3 + x$." It means 3 times x.
- "Do the operation you see." Use the inverse operation to undo it.
- "Only change one side of the equation." Whatever you do to one side, do to the other.