

Name: _____ Date: _____ Pd: _____

INEQUALITIES APPLICATIONS WORKSHEET #1

For Exercises 1–4, use the table below.

Amusement Park Rides Height Requirements			
Ride	Height Requirement	Ride	Height Requirement
Jungle Jam	minimum of 40 in.	The Spiral	more than 35 in.
Tilt-a-Whirl	at least 48 in.	Ladybug	under 46 in.
Stargazer	more than 44 in.	Leapin' Lizard	at least 38 in.
Bunny Hop	60 in. maximum	Racetrack	over 42 in.

1) Write and graph an inequality that represents the heights of people who can ride the Tilt-a-Whirl.

Inequality: _____ Graph: 

2) Write and graph an inequality that represents the heights of people who can ride the Ladybug.

Inequality: _____ Graph: 

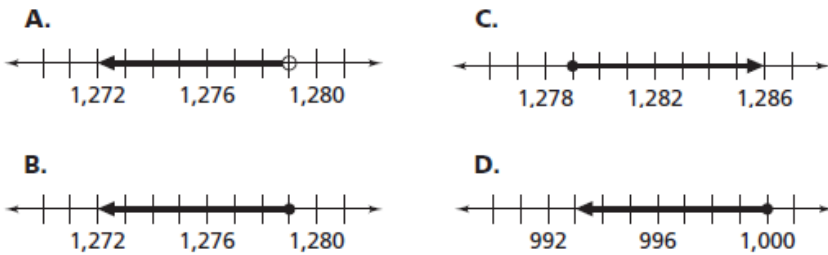
3) Is it possible that someone is able to ride the Spiral but not the Leapin' Lizard? If so, give that person's height.

4) Would someone be able to ride both the Tilt-a-Whirl and the Ladybug? Explain your answer.

5) Playing a video game, Emily has gained some points, lost 107 points, and finishes at less than 800 points. The inequality $p - 107 < 800$ represents this situation. Solve and graph the inequality.

Solve here: $p - 107 < 800$ Graph: 

6. **Multiple Choice** On level 2 of a video game, the maximum number of points is 1,000. Emily has lost 279 points and is on level 2. The inequality $p - 279 \leq 1,000$ represents this situation. Which is the graph of its solution?



For Exercises 7–9, use the table below.

Florida Hiking Trails		
Trail	Location	Length
Citrus Hiking Trail	Withlacoochee State Forest	43.3 miles
Myakka Hiking Trail	Myakka River State Park	49 miles
Big Oak Trail	Suwannee River State Park	12.5 miles
Florida Trail	Ocala National Forest	71 miles

7) Solve here: $9d + 71 > 350$

7. Camille has a goal of hiking more than 350 miles this year. She already hiked the Florida Trail and now plans to hike 9 miles each day for d days. The inequality $9d + 71 > 350$ represents this situation. Solve and graph the inequality.

Graph here:



8. **Multiple Choice** Camille's brother Roberto hiked the Florida Trail with her and the Myakka Hiking Trail alone. He wants to hike no more than 400 miles this year and now plans to hike d day trips of 10 miles each. Which inequality could represent this situation?

- A. $10d + 120 > 400$ C. $10d + 120 \leq 400$
 B. $10d + 120 \geq 400$ D. $10d + 120 < 400$

9. Miquel does all of his hiking on the Big Oak Trail. He already has hiked it 3 times this year and has a goal of hiking at least 75 total miles this year. Write and solve an inequality representing the number of times b he needs to hike the Big Oak Trail to reach his goal.

Inequality: _____

Graph:

