

Algebraic Inequality Story

Directions: Read the story and as you are reading, underline, circle, or highlight phrases that represent inequality relationships.

The Martin Middle School physics club took a field trip to Six Flags! Upon arriving, the science teacher purchased tickets for the group. There were 45 students in the group and 10 adults. Each ticket cost \$25.

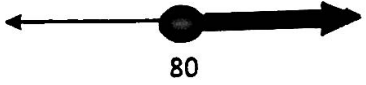



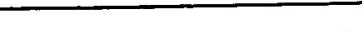
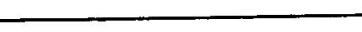






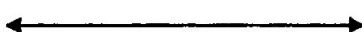
Upon entering the gate, Maddie and Alexis immediately ran to the new roller coaster where they saw no fewer than 80 people standing in line. The ride can hold from 2 to 28 passengers. After waiting for less than 10 minutes, they got their turn on the roller coaster. The highest point of the roller coaster is no more than 91 feet and the speed gets up to 50 mph. The ride took less than 2 minutes.

The temperature on this day was at least 80°F. So the next ride they ran to was a water ride. This ride could hold up to 60 people at a time, so their wait time was less than 5 minutes. After getting soaked on the water ride, they needed to dry off, so they met some friends at the Southern Star. As they approached the ride, they read a sign that said riders must be between 48 and 72 inches tall, therefore their science teacher, Mr. Beko, could not ride with them. The students screamed and laughed as the ride was swinging back and forth. After finishing the ride, Mr. Beko explained the physics behind the ride. He stated that the ride reached a maximum speed of 33 mph and a maximum height of 80 feet above the ground when the ride was completely upside down.

Next the students decided to drive the Dodg'ems Bumper Cars. Each car seated exactly two people and there were no more than 30 cars on the track at one time. Therefore all the kids and adults in the group could ride at the same time. The sign beside the ride noted that riders had to be at least 48 inches tall to drive the bumper cars; they did not have to worry about this rule!

More Directions:

1. Translate each verbal inequality phrase into an algebraic and graphic representation using the chart on the back to help you stay organized!
2. Finish the story on the lines above using a minimum of 5 or more inequality relationships.

Verbal (keep them in order from story)	Algebraic (symbols use variable x)	Graphically: what kind of circle? < or > = open ≤ or ≥ = closed
1) No fewer than 80 people	$X \geq 80$	 80
2)		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		