

LESSON
3-1

Problem Solving
Graphing and Writing Inequalities

Write the correct answer.

1. A citizen must be at least 35 years old in order to run for the Presidency of the United States. Define a variable and write an inequality for this situation.
2. A certain elevator can hold no more than 2500 pounds. Define a variable and write an inequality for this situation.

3. Approximately 30% of the land on Earth is forested, but this percent is decreasing due to construction. Write and graph an inequality for this situation.
4. Khalil weighed 125 pounds before he started to gain weight to play football. Write and graph an inequality for this situation.



The Sanchez family is visiting an amusement park. When they enter the park, they receive a brochure which lists several requirements and restrictions. Select the best answer.

5. You must be at least 50 inches tall to ride The Wild Tornado roller coaster. Which of the following inequalities fits this situation?
6. Children less than 12 years old must be accompanied by an adult inside The Haunted House. Which of the following inequalities shows the ages of children who require an adult inside the house?

- A** $h \leq 50$ **C** $h \geq 50$
B $h < 50$ **D** $h > 50$

- F** $y \leq 12$ **H** $y \geq 12$
G $y < 12$ **J** $y > 12$

7. Totland is an area of the amusement park set aside for children who are 6 years old or younger. Which of the following inequalities represents the ages of children who are allowed in Totland?
8. The Bumpy Cars will not be turned on if there are 5 or more empty cars. Which of the following inequalities shows the possible numbers of empty cars if the ride is going to start?

- A** $a \leq 6$ **C** $a \geq 6$
B $a < 6$ **D** $a > 6$

- F** $c \leq 5$ **H** $c \geq 5$
G $c < 5$ **J** $c > 5$