

# Inequalities and the Number Line

Name three solutions of each inequality. Then graph each inequality on a number line.

1.  $b \geq 5$



**5, 6, 8**

2.  $s + 2 \leq 4$



**2, 1, 0**

3.  $x \leq 3$



**0, 1, 2, 3**

4.  $d - 1 \geq 6$



**8, 9, 10**

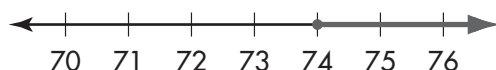
5. Lizette wants to read more books. Her goal is to read at least 2 books each month. Let  $m$  represent the number of books she will read in a year. Use  $m \geq 24$  to graph the number of books she plans to read on a number line.



6. **Estimation** Marcus is making cookies for his class. There are 26 students, and he wants to bring 3 cookies per student. On Sunday, he runs out of time and decides he must buy at least half the cookies and will make no more than half from scratch. Draw a graph to represent how many cookies he will make himself.



7. Which sentence is graphed on the line below?



A  $m > 74$

**B**  $m \geq 74$

C  $m = 74$

D  $m < 74$

8. **Explain It** How do you know whether to use an open circle or a closed circle when graphing an inequality?

**Use an open circle when the inequality symbol is  $>$  or  $<$ . Use a closed circle when the inequality symbol is  $\geq$  or  $\leq$ .**