

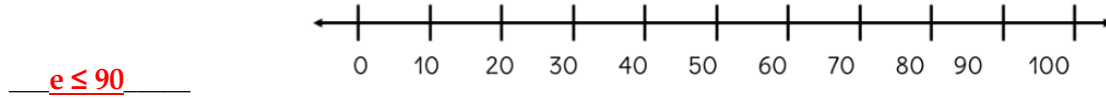
Write an equation or inequality for each problem situation. Graph each solution on the number line.
Remember...

Keep the variable on the left!

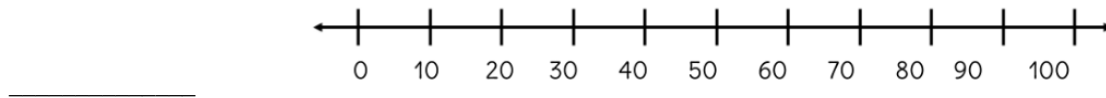
Shade to the LEFT for $<$ or \leq and shade to the RIGHT for $>$ or \geq .

OPEN circle for $<$ or $>$ and CLOSED circle for \leq or \geq .

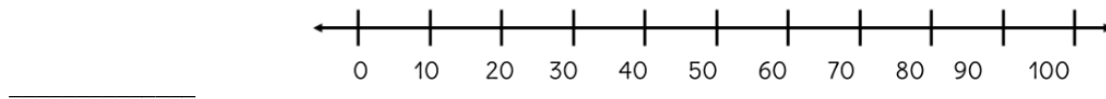
1. The essay should be **no more than** 90 words.



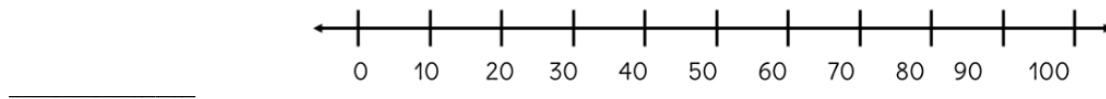
2. The gym can hold **up to** 100 students.



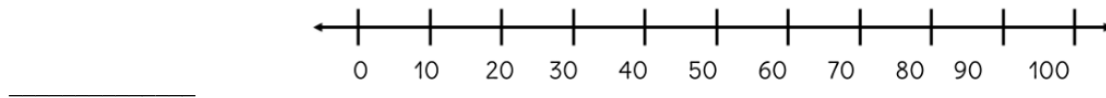
3. Anna is **taller than** 5 feet.



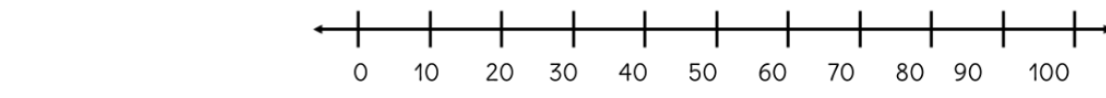
4. The temperature feels like its **hotter than** 80° F.



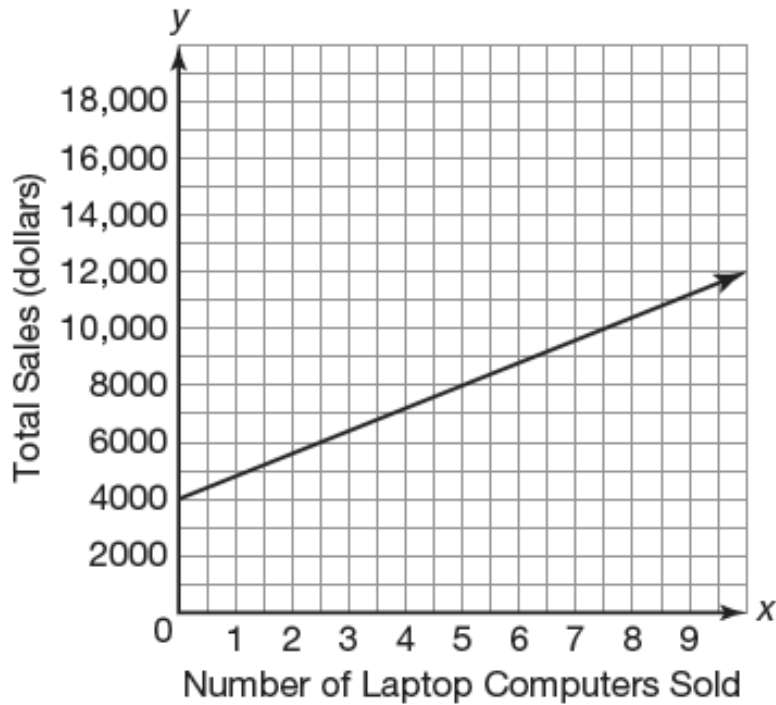
5. To get free shipping, you must spend **at least** \$75.



6. John is 55 inches tall.



Carlos works at an electronics store selling computer equipment. He earns a bonus if he sells \$10,000 worth of computer equipment this month. So far, he sold \$4,000 worth of equipment. He hopes to sell additional computers for \$800 each to reach his goal. The function $f(x) = 800x + 4000$ represents Carlos's total sales as a function of the number of laptop computers he sells.



Use the graph to write an equation or inequality that estimates the number of laptop computers Carlos needs to sell to earn each amount.

Remember...

Find the value of $f(x)$ on the y-axis and draw a horizontal.

Find the point-of-intersection (POI) with the graph of the function.

Create a box by drawing a vertical line from the POI to the x-axis.

7. At least \$10,000

8. Less than \$7,000

$$800x + 4000 \geq 10000$$

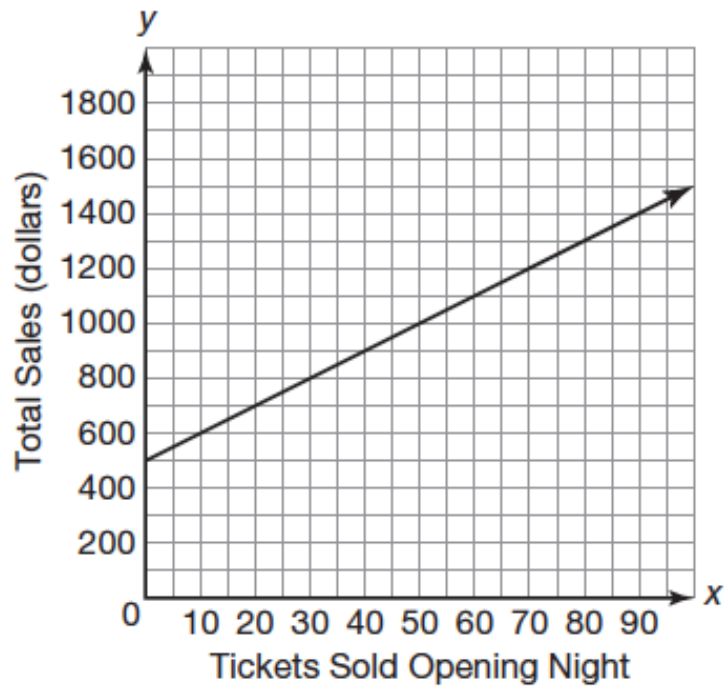
$$x \geq 8$$

Carlos would need to sell at least 8 laptop computers.

9. More than \$12,000

10. Exactly \$8,000

Elena works at the ticket booth of a local playhouse. On the opening night of the play, tickets are \$10 each. The playhouse has already sold \$500 worth of tickets during a presale. The function $f(x) = 10x + 500$ represents the total sales as a function of tickets sold on opening night.



Use the graph of the function to answer each question. Graph each solution on the number line. Then, check your solution by solving the equation or inequality.

11. How many tickets must Elena sell in order to make less than \$800?

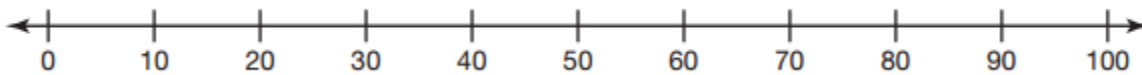
$$x < 30$$

Elena must sell fewer than 30 tickets.

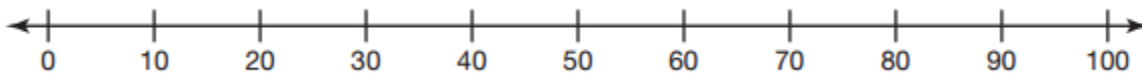
$$10x + 500 < 800$$

$$10x < 300$$

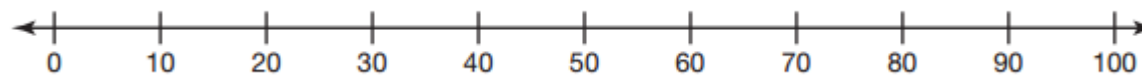
$$x < 30$$



12. How many tickets must Elena sell in order to make at most \$1,000?



13. How many tickets must Elena sell in order to make a minimum of \$1,200?



14. How many tickets must Elena sell to make no more than \$1,400?

