

8 Chapter Test



Write the word sentence as an inequality.

1. A number x is at most 5. 2. A number m is more than -8 .

Tell whether the given value is a solution of the inequality.

3. $5n > 20$; $n = 3$ 4. $k - 8 \leq 6$; $k = 14$

Graph the inequality on a number line.

5. $x \geq 5$ 6. $m \leq -2$

Solve the inequality. Graph the solution.

7. $x - 3 < 7$ 8. $12 \geq n + 6$
9. $\frac{b}{3} \leq 12$ 10. $\frac{y}{2} + 1 \geq 3$
11. $72 > 12p$ 12. $9j - 3 \leq 15$

13. **HURRICANE** A hurricane has wind speeds that are greater than or equal to 74 miles per hour. Write an inequality to represent the possible wind speeds during a hurricane.

14. **T-SHIRTS** A soccer team will sell T-shirts for a fundraiser. The company that makes the T-shirts charges \$8 per shirt plus a \$20 shipping fee per order. The team plans to spend no more than \$400.

- a. Write and solve an inequality to represent the number of T-shirts the team could order.
- b. What is the maximum number of T-shirts the team can order? Explain.

15. **LETTERS** The U.S. Postal Service delivers letters that weigh up to 3.5 ounces. Write an inequality to represent the weight of a letter you can mail.



16. **LIBRARY** The sign shows the fines for a book that is d days late. Write and solve an inequality to represent when paying to replace a book is less expensive than paying the fine.

17. **NUMBER SENSE** The possible values of n are given by $n - 4 \leq 10$. What is the greatest possible value of $\frac{n}{2}$?