

5-2 Practice

Solving Inequalities by Multiplication and Division

Match each inequality with its corresponding statement.

- | | |
|--------------------------|---|
| 1. $-4n \geq 5$ | a. Negative four times a number is less than five. |
| 2. $\frac{4}{5}n > 5$ | b. Four fifths of a number is no more than five. |
| 3. $4n \leq 5$ | c. Four times a number is fewer than five. |
| 4. $\frac{4}{5}n \leq 5$ | d. Negative four times a number is no less than five. |
| 5. $4n < 5$ | e. Four times a number is at most five. |
| 6. $-4n < 5$ | f. Four fifths of a number is more than five. |

Solve each inequality. Check your solution.

- | | | | |
|------------------------------|--------------------------|-----------------------------|------------------------------|
| 7. $-\frac{\alpha}{5} < -14$ | 8. $-13h \leq 52$ | 9. $\frac{b}{16} \geq -6$ | 10. $39 > 13p$ |
| 11. $\frac{2}{3}n > -12$ | 12. $-\frac{5}{9}t < 25$ | 13. $-\frac{3}{5}m \leq -6$ | 14. $\frac{10}{3}k \geq -10$ |
| 15. $-3b \leq 0.75$ | 16. $-0.9c > -9$ | 17. $0.1x \geq -4$ | 18. $-2.3 < \frac{j}{4}$ |
| 19. $-15y < 3$ | 20. $2.6v \geq -20.8$ | 21. $0 > -0.5u$ | 22. $\frac{7}{8}f \leq -1$ |

Define a variable, write an inequality, and solve each problem. Check your solution.

23. Negative three times a number is at least 57.
24. Two thirds of a number is no more than -10 .
25. Negative three fifths of a number is less than -6 .
26. **FLOODING** A river is rising at a rate of 3 inches per hour. If the river rises more than 2 feet, it will exceed flood stage. How long can the river rise at this rate without exceeding flood stage?
27. **SALES** Pet Supplies makes a profit of \$5.50 per bag on its line of natural dog food. If the store wants to make a profit of no less than \$5225 on natural dog food, how many bags of dog food does it need to sell?