



In this worksheet you will learn how to solve inequalities and graph their solutions on a number line. Follow the instructions for each question and show all your working. All mathematical expressions are presented in inline display style.

Easy Questions

1. Solve the inequality $2x + 3 < 7$.
2. Solve the inequality $-x > 5$.
3. Solve the inequality $3x - 4 \leq 2$.
4. Solve and graph on a number line the inequality $x \geq 4$.
5. Solve and graph on a number line the inequality $x - 6 \geq -1$.

Intermediate Questions

6. Solve the inequality $2x - 5 > 3$.
7. Solve the inequality $-3x + 7 \leq 1$.
8. Solve the inequality $4 - 2x \geq 0$.
9. Solve the inequality $\frac{x + 2}{3} < 4$.
10. Solve the inequality $5 - 3x > -10$.
11. Solve and graph on a number line the inequality $x + 1 \geq 3$.
12. Graph on a number line the inequality $x < -2$.
13. Graph on a number line the inequality $2x \leq 8$.
14. Solve and graph on a number line the inequality $7 - 2x \geq 3$.
15. Solve the inequality $3x + 4 > 2x + 7$.
16. Solve the inequality $5x - 3 \leq 2x + 6$.
17. Solve and graph on a number line the inequality $6 - x > 2$.
18. Solve the double inequality $-2 \leq x - 3 < 5$.
19. Solve the inequality $4x + 1 \geq 2x + 5$.
20. Solve the inequality $2 - 3x < -4$.

Hard Questions

21. Solve and graph on a number line the inequality $\frac{1}{2}x - \frac{3}{4} > \frac{1}{4}x + 1$.
22. Solve the inequality $-2(3 - x) \leq x + 4$.
23. Solve the inequality $3(2x - 1) - 4(x + 2) > 2$.
24. Solve the inequality $\frac{2x + 3}{5} \leq \frac{x - 1}{2}$.
25. Solve and graph on a number line the inequality $4 - \frac{1}{2}x < 2x + 1$.
26. Solve the inequality $\frac{x}{3} - \frac{2}{3} \geq \frac{1}{6}x$.
27. Solve the inequality $\frac{5 - x}{2} > \frac{x - 3}{4}$.
28. Solve and graph on a number line the inequality $-\frac{3}{2}x + 4 \geq 2$.
29. Solve the compound inequality $1 \leq 2x + 1 < 7$.
30. Solve the inequality $3(x - 2) + 2(1 - x) \leq 4$.