

Solving Inequations

Solve each inequality for x . Remember that you will sometimes need to reverse the inequality sign.

1. $4x + 1 > 9$

2. $3x - 2 < 10$

3. $2x < 4x + 10$

4. $3x \geq 5x + 8$

5. $2(x + 3) > 16$

6. $5(x - 1) \leq 10$

7. $2x - 18 > 5x$

8. $3x + 1 > x + 15$

9. $2x + 1 < 5x + 7$

10. $1 - 2x < 15$

11. $10 - 3x > 4$

12. $3x + 10 < x + 2$

13. $2x - 10 > 5x + 8$

14. $2(x - 6) > 5x$

15. $2(2x + 3) > x + 18$

16. $3x + 1 \geq 9 - x$

17. $x + 2 < 4x + 20$

18. $3x + 4 \leq x - 10$

19. $5x + 12 > x + 4$

20. $3x - 1 < 5x - 9$

21. $3(2x - 1) < 27$

22. $2x - 12 < 6x$

23. $2x + 1 > 5(x + 5)$

24. $4x + 1 \geq 16 - x$

25. $3(x + 4) > 5x$

26. $x + 8 < 3x - 2$

27. $2x - 4 < 11 - x$

28. $2(x + 3) + 4 > 20$

29. $4(x + 1) \leq 2(x + 5)$

30. $3(x - 2) < 5(x + 2)$

31. $2(x + 2) - 10 > 8$

32. $3(x - 4) + 1 < 16$

33. $x + 8 \leq 3x - 2$

Answers

- | | | | | | | | |
|-----|------------|-----|-------------|-----|----------|-----|-------------|
| 1. | $x > 2$ | 2. | $x < 4$ | 3. | $x > -5$ | 4. | $x \leq -4$ |
| 5. | $x > 5$ | 6. | $x \leq 3$ | 7. | $x < -6$ | 8. | $x > 7$ |
| 9. | $x > -2$ | 10. | $x > -7$ | 11. | $x < 2$ | 12. | $x < -4$ |
| 13. | $x < -6$ | 14. | $x < -4$ | 15. | $x > 4$ | 16. | $x \geq 2$ |
| 17. | $x > -6$ | 18. | $x \geq -7$ | 19. | $x > -2$ | 20. | $x > 4$ |
| 21. | $x < 5$ | 22. | $x > -3$ | 23. | $x < -8$ | 24. | $x \geq 3$ |
| 25. | $x < 6$ | 26. | $x > 5$ | 27. | $x < 5$ | 28. | $x > 5$ |
| 29. | $x \leq 3$ | 30. | $x > -8$ | 31. | $x > 7$ | 32. | $x < 9$ |
| 33. | $x \geq 5$ | | | | | | |