

Lesson 5.4

Solve the following equations. Some equations will have a single answer, others will have no solution, and still others will have infinite solutions.

1. $2x + 2x + 2 = 4x + 2$

2. $3(x - 1) = 2x + 9$

3. $2x + 8 = 2(x + 4)$

4. $2x - x + 7 = x + 3 + 4$

5. $-2(x + 1) = -2x + 5$

6. $4x + 2x + 2 = 3x - 7$

7. $2(x + 2) + 3x = 2(x + 1) + 1$

8. $4(x - 1) = \frac{1}{2}(x - 8)$

9. $x + 2x + 7 = 3x - 7$

10. $3x - x + 4 = 4(2x - 1)$

11. $4(2x + 1) = 5x + 3x + 9$

12. $10 + x = 5\left(\frac{1}{5}x + 2\right)$

13. $8(x + 2) = 2x + 16$

14. $3 + \frac{3}{2}x + 4 = 4x - \frac{5}{2}x$

15. $\frac{3}{2}(2x + 6) = 3x + 9$

16. $\frac{1}{2}(2 - 4x) + 2x = 13$

17. $12 + 2x - x = 9x + 6$

18. $4x + 1 = 2(2x + 3)$

19. $4(x + 3) - 4 = 8\left(\frac{1}{2}x + 1\right)$

20. $x + 5x + 4 = 3(2x - 1)$

21. $5(x + 2) - 3x = 2(x + 5)$

22. $3x + 1 = 3(x - 1) + 4$

23. $4x + 2x - 5 = 7x - 1$

24. $-2(x + 1) = 2(x - 1)$

25. $2(x + 5) = 2x + 5$

26. $2(3x + 3) = 3(2x + 2)$

27. $2x + 1 - 4 = -2x - 3$

28. $4(x + 1) = 4(2 - x)$

29. $3x + 7x + 1 = 2(5x + 1)$

30. $6(x + 1) + 5 = 13 - 2 + 6x$