

3-4 EXERCISES

A

Which of the following equations are linear? If an equation is not linear, give the reason.

1. $3x - 4 = y$

3. $4r^2 = 2r + 1$

5. $y = 7$

7. $4x - 5y = 20$

9. $3p - 4 = q - 1$

2. $x = 9$

4. $2 + 3pq = -9$

6. $3x^2 + 4y^2 = 16$

8. $5 = \frac{1}{x}$

10. $5 = r + 4t$

Graph each of the following linear equations.

11. $x + 2y = 4$

12. $x + 3y = 9$

13. $-x + 4y = 8$

14. $-x + 2y = 6$

15. $4x + y = 8$

16. $3x + y = 6$

17. $3y - 3 = 6x$

18. $2y - 6 = 4x$

19. $y = -\frac{5}{2}x - 4$

20. $y = -\frac{2}{5}x + 3$

21. $3x + 6y = 18$

22. $4x + 5y = 20$

23. $x - 2 = y$

24. $x - 4 = y$

25. $3a - 1 = b$

26. $3a - 4 = b$

27. $5x - 4y = 20$

28. $3x - 5y = 15$

29. $y = -5 - 5x$

30. $y = -2 - 2x$

31. $2p + 7q = 14$

32. $3p + 6q = 12$

33. $8r - 3t = 24$

Graph and compare.

34. $y = 3x + 3$ and $y = 3x$

35. $y = -2x - 4$ and $y = -2x$

36. $y = \frac{1}{2}x + 1$ and $y = \frac{1}{2}x$

Graph.

37. $x = 2$

38. $x = 4$

39. $y = -6$

40. $y = -3$

41. $x = -5$

42. $x = -3$

43. $y = 7$

44. $y = 5$

45. $3y - 9 = 0$

46. $3x + 15 = 0$

47. $2x - 10 = 0$

48. $6y + 24 = 0$