

Indices Solutions

1. (a) a^5
(b) x^4
(c) $6x^5$
(d) x^3
(e) x^3
(f) 1
(g) 3
(h) a^6
(i) x^3
(j) $9a^2b^2$
2. $n = 3$
3. $n = 2$
4. $n = -1$
5. $n = \frac{4}{3}$
6. (a) $x = -\frac{2}{3}$
(b) $x = -\frac{5}{2}$
(c) $x = 3$
(d) $x = -\frac{3}{2}$
7. (a) $x = -\frac{1}{2}$
(b) $x = \frac{5}{4}$
(c) $x = -\frac{1}{6}$
(d) $x = -\frac{1}{3}$
8. 7
9. $\frac{5}{4}$
10. 3
11. $\frac{13}{2}$

12. $\frac{3}{2}$
13. 1, 3
14. $-\frac{1}{3}, 2$
15. $x = 1, y = 1$
16. $x = 21, y = 6$
17. $x = 1, y = 0$
18. $x = 2, y = -1$
19. $x = 1, y = 3$
20. $x = 4, y = -2$
21. (a) $x = 2$
(b) $x = 1$
(c) $x = 3$
(d) $x = -1$
(e) $x = 1$
(f) $x = 2$ or $x = -1$
22. (a) $x = 0$ or $x = 2$
(b) $x = 1$ or $x = 0$
(c) $x = -2$ or $x = 2$
(d) $x = 0$
(e) $x = -1$ or $x = 0$
23. (a) $x = 2$
(b) $x = -1$
24. (a) $x = 0, 3$
(b) $x = 0, 2$
25. (a) y^2
(b) $2y^2$
(c) $8y; x = -1, 2$
26. $3y^2; x = -1, 2$
27. $x = 0, -1$
28. $x = -\frac{1}{2}, 0$
29. $x = 0, 3$

30. $x = 1, 3$

31. $x = 3$

32. $x = -1$

33. $-1, 0$

34. $1, 2$

35. $-2, 2$

36. $p = \frac{11}{12}$

37. $a^{n^2-2n}; n = 1$

38. to be shown

39. $k = 2$