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India's Number 1 Education App

## MATHS

# BOOKS - JNAN PUBLICATION 

## CONCEPT OF INDEX

## Example

1. Let's expand the following in index of 10

8275

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2. Let's expand the following in index of 10

90925
3. Let's expand the following in index of 10

12578

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4. Let's expand the following in index of 10

7858

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5. Fill in the blanks:
$100=10^{?}$

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6. Fill in the blanks:
$27=3$ ?
7. Fill in the blanks:
$125=5^{?}$

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8. Fill in the blanks:
$32=2$ ?

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9. Fill in the blanks:
$343=7$ ?
10. Fill in the blanks:
$121=11 ?$

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11. Fill in the blanks:
$2^{3}=? \times ? \times ?$

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12. Fill in the blanks:
$3^{4}=? \times ? \times ? \times ?$

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13. Fill in the blanks:
$729=9$ ?

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14. Fill in the blanks:
$2 \times 2 \times 2 \times 2=2 ?$

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15. Fill in the blanks:
$(-2) \times(-2) \times(-2)=(-2) ?$

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16. Fill in the blanks:
$(-2) \times(-2) \times(-2) \times(-2)=(-2) ?$
17. Let's express the following numbers in the index form of their prime factor.
18. Let's express the following numbers in the index form of their prime factor.

56

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19. Let's express the following numbers in the index form of their prime factor.
20. Let's express the following numbers in the index form of their prime factor.

72

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21. Let's express the following numbers in the index form of their prime factor.

200

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22. Let's put > or < signs in the respective blanks squares.
$5^{3} ? 3^{5}$

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23. Let's put > or < signs in the respective blanks squares. $6^{2} ? 2^{6}$

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24. Let's put > or < signs in the respective blanks squares. $2^{4} ? 4^{2}$

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25. Let's put > or < signs in the respective blanks squares.
$7^{2} ? 2^{7}$

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26. Let's put > or < signs in the respective blanks squares.
$3^{4} ? 4^{3}$
27. Let's put > or < signs in the respective blanks squares. $3^{5} ? 5^{3}$

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28. Solve:-
$2^{5} \times 2^{7}=?$

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29. Solve:-
$(-13)^{18} \times(-13)^{12}=?$

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30. Solve:-

$$
10^{5} \times 10^{2}=?
$$

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31. Solve:-
$2^{15} \div 2^{13}$

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32. Solve:-
$9^{15} \div 9^{14}=?$

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33. Solve:-
$11^{6} \times 11^{4}=?$
34. Let's fill in the blank squares given below:-
$9^{2} \div 9^{2}=?$

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35. Let's fill in the blank squares given below:-
$7^{3} \div ?=1$

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36. Let's fill in the blank squares given below:-
$11^{0}=?$
37. Let's fill in the blank squares given below:-
$1=13$ ?

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38. Let's fill in the blank squares given below:-
$1=(-13)^{?}$

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39. Let's fill in the blank squares given below:-

$$
6^{5} \div 2^{5}=?
$$

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40. Let's fill in the blank squares given below:-
$?=7^{2} \div 2^{2}$
41. Let's fill in the blank squares given below:-

$$
10^{2}=? \times ?
$$

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42. Let's fill in the blank squares given below:-
$(-4)^{2} \times 6^{2}=?^{2}$

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43. Let's fill in the blank squares given below:-
$5^{\circ}=?$
44. Let's fill in the blank squares given below:-
$\left(\frac{2}{3}\right)^{3}=(?) \div(?)$

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45. Express $8 \times 8 \times 8$ as index of 2 .

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46. $25 \times 25 \times 25 \times 25$ to be expressed as index of 5 .

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47. Let's express $36 \times 36 \times 36$ as index of 6 .

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48. Let's expressed $81 \times 81$ and index of 3 .

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49. Find the values of following.
$\frac{2^{6} \times 3^{5}}{(6)^{3}}$

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50. Find the values of following.
$\frac{10^{3} \times 10^{4}}{2^{5} \times 5^{4}}$

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51. Find the values of following.
$\frac{5^{9} \times 5^{6}}{5^{7}}$
52. Find the values of following. $\frac{6^{4} \times 3^{8}}{3^{12}}$

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53. Find the values of following.
$\frac{25^{2} \times 25^{5}}{5^{10}}$

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54. Find the values of following.
$\frac{2^{3} \times 3^{9}}{3^{4} \times 6^{3}}$

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55. Find the values of following.
$\left(\frac{a^{7}}{a^{5}}\right) \times a^{2}(a \neq 0)$

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56. Let's express the distances given below in index of 10 and try to get a better idea of the distances.

Distance of Mercury from Sun is 57900000 km . Distances of Mars and Jupiter from Sun are 227900000 km . and 778300000 km . respectively.

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57. Let's fill in the gaps.

Distance between earth and moon is $384,000,000 \mathrm{~m}$.

$$
=384 \times 10^{?} \mathrm{~m}
$$

58. The speed of light in air is-

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59. Let's express the following number in index from as power of 10 (taking 1,2 and 3 places of decimal).

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60. Let's express the following number in index from as power of 10 (taking 1,2 and 3 places of decimal).

1592170

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61. Let's from the numbers from their expanded from given below:-
$3 \times 10^{3}+2 \times 10^{2}+7 \times 10+2$

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62. Let's from the numbers from their expanded from given below:-
$2 \times 10^{3}+3 \times 10+5$

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63. Let's from the numbers from their expanded from given below:$8 \times 10^{4}+2 \times 10^{3}+3 \times 10^{2}+6$ and $9 \times 10^{4}+5 \times 10^{3}+6 \times 10^{2}+7 \times 1$

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64. Let's simplify and express each of them in index form:-

$$
\frac{2^{3} \times 3^{5} \times 16}{3 \times 32}
$$

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65. Let's simplify and express each of them in index form:- V $\left[\left(6^{2}\right)^{3} \times 6^{4}\right] \div 6^{7}$

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66. Let's simplify and express each of them in index form:- V $\frac{3 \times 7^{2} \times 11^{0}}{21 \times 7}$

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67. Let's simplify and express each of them in index form:- V $\left(3^{0}+2^{0}\right) \times 5^{0}$

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68. Let's simplify and express each of them in index form:- V
$\frac{4^{5} \times a^{8} b^{3}}{4^{4} \times a^{5} b^{2}}$
69. Let's simplify and express each of them in index form:- V
$\frac{32^{8} \times x^{7}}{4^{3} \times x^{3}}(x \neq 0)$

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