

Indices

Worksheet – 9

1. What is the base and the index of 8^4 ?

Base =

Index =

2. Write down the following products using index notation.

i. $2 \times 2 \times 2 \times 2 =$

ii. $4 \times 4 =$

iii. $7 \times 7 \times 5 \times 5 =$ $\times$

iv. $2 \times 2 \times 2 \times 3 \times 3 \times 5 =$ $\times$ $\times$

v. $2 \times 3 \times 3 \times 2 \times 5 \times 2 \times 3 \times 5 =$ $\times$ $\times$

3. Fill in the blanks.

i. $25 = 5$

ii. $36 = 6$

iii. $= 8^2$

iv. $125 = 5$

v. $= 10^3$

vi. $= 4^3$

vii. $= 12^2$

4. Find the value of each of the following expressions.

Ex. $2^3 \times 3^2 = 2 \times 2 \times 2 \times 3 \times 3$
 $\qquad\qquad\qquad \underbrace{\hspace{1.5cm}}_8 \quad \times \quad \underbrace{\hspace{1.5cm}}_9 = 72$

i. $2^4 \times 3^2 =$

ii. $3^2 \times 5^2 =$

iii. $12^2 \times 1^2 =$

iv. $2^3 \times 5^2 \times 4 =$

v. $3^3 \times 5^2 \times 2 =$

5. Write down 256

i. As a power of 2 =

ii. As a power of 4 =

6. Fill in the blanks appropriately with either the symbol “<” or “>”.

i. 2^4 3^2

ii. 5^2 4^2

iii. 6^2 41

iv. 8^2 9^2