



# INDIAN SCHOOL NIZWA - WORKSHEET

## MATHEMATICS

CH: 13,14 &15 : Exponents  
and Powers

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: VII Sec: \_\_\_\_

Q.1 Express 3600 as product of powers of its prime factors.

Q.2 Simplify using laws of exponents –

(i)  $\{(2^2)^3 \times 3^6\} \times 5^6$

(ii)  $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

Q.3 Complete the following table: –

S. No.	Usual Form	Exponential Form	Standard Form	Expanded Form
1.	682403056	_____	_____	_____
2.	_____	_____	_____	$1 \times 10^4 + 4 \times 10^3$ $+ 3 \times 10^4 + 3 \times 0^1 +$ $5 \times 10^0$

Q.4 Fill in the blanks:-

(i) If a is any non-zero rational number then  $a^0 =$  \_\_\_\_\_.

(ii)  $a \times a \times a \times$  \_\_\_\_\_ m times =  $a^m$  where **a** is called the \_\_\_\_\_ and **m** is called the \_\_\_\_\_.

(iii)  $(-1)^{\text{odd positive integer}} =$  \_\_\_\_\_.

(iv)  $(-1)^{\text{even positive integer}} =$  \_\_\_\_\_.

(v)  $(\frac{17}{20})^0 \times (-3)^0 =$  \_\_\_\_\_.

(vi)  $\frac{2^0 \times 5^0 \times 8^0}{2^0 + 5^0 + 8^0} =$  \_\_\_\_\_.

(vii)  $(\frac{-3}{7})^4 \times (\frac{-3}{7})^5 =$  \_\_\_\_\_.



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(viii)  $\frac{2}{5} \times \frac{2}{5} \times \frac{2}{5} = \underline{\hspace{2cm}}$ .

(ix)  $4^7 \div 4^3 = \underline{\hspace{2cm}}$ .

(x)  $[(\frac{2}{5})^2]^5 = \underline{\hspace{2cm}}$ .

(xi) The standard form for 70, 00, 000 is  $\underline{\hspace{2cm}}$ .

Q.5 Find p so that:-  $(625)^2 \times 5^7 = (5)^{5p}$

Q.6 State true or false :-

(i)  $(\frac{3}{5})^2 \times (\frac{3}{5})^3 = (\frac{3}{5})^6$

(ii)  $(\frac{-2}{3})^0 = 0$

(iii)  $[(\frac{2}{5})^6 \div (\frac{2}{5})^5] \div \frac{2}{5} = 3^0$

(iv)  $[(\frac{4}{7})^4]^5 = (\frac{4}{7})^{20}$

Q.7 Write 81 in exponential form with base as 3?

Q.1. Fill in the blanks: -

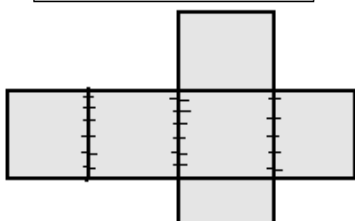
- (i) A figure has  $\underline{\hspace{2cm}}$  symmetry, if there is a line about which the figure may be folded so that the two parts of the figure will coincide.
- (ii) A regular  $\underline{\hspace{2cm}}$  has 6 lines of symmetry.
- (iii) A regular square has  $\underline{\hspace{1cm}}$  lines of symmetry.
- (iv) Two figures that have both horizontal and vertical line of symmetry  $\underline{\hspace{2cm}}$  &  $\underline{\hspace{2cm}}$ .
- (v) An example of a geometrical figure which has no line of symmetry  $\underline{\hspace{2cm}}$ .

## Visualising Solid Shapes

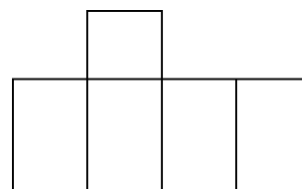
(Only Maths Lab Activity)

OBJECT: To make net of a cube, cuboid and a square pyramid.

Method: NET OF A CUBE



NET OF A CUBOID





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