



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	Expanded Form
1.	682403056	=====	_____
2.	_____	_____	$1 \times 10^4 + 4 \times 10^3 + 3 \times 10^2 + 3 \times 10^1 + 5 \times 10^0$

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 $\underline{\hspace{2cm}}$.



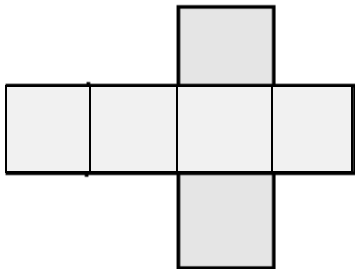
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Visualising Solid Shapes

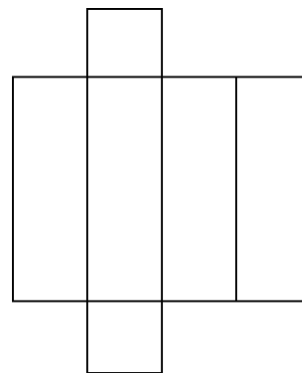
(Only Maths Lab Activity)

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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