



INDIAN SCHOOL DARSAIT DEPARTMENT OF MATHEMATICS



Subject : Mathematics	Topic : Exponents and powers	Date of Worksheet
Resource Person: Mrs Priya Bijukumar	Date : _____	
Name of the Student : _____	Class & Division : VIII	Roll Number : ____

	<u>SECTION-A</u>	Marks
	<p><u>Do as directed.</u></p> <p>$(-1)^{21} = \underline{\hspace{2cm}}$ (Write the value)</p> <p>$(-2) \times (-2) \times (-2) = \underline{\hspace{2cm}}$ (Write in exponential form)</p> <p>$3 \times 3 \times x \times x \times x = \underline{\hspace{2cm}}$ (Write in exponential form)</p> <p>$(-4)^{500}$, value is $\underline{\hspace{2cm}}$ (State whether negative /positive)</p> <p>Write the base and the exponent in the following</p> <p>(a) 6^{-3} (b) $(3^2)^3$ (c) 3^0 (d) $3^2 \times 6^2$</p> <p>Express the following numbers as a product of primes: (a) 288 (b) 135 (c) 729×64</p> <p>Which is greater? (a) 4^3 or 3^4 (b) 9^2 or 2^9</p>	
	<u>SECTION-B</u>	
1	Evaluate a) 6^{-3} (b) 4^{-5}	1
2	Simplify and express in power notation with positive exponents a) $[(3^3)^{-2} \times 3^4] \div 3^2$ b) $[(4^{-3} \div 4^4) \times 16]$ c) $\frac{(-2)^3 \times 5^3 \times (-3)^4}{125 \times 3^4}$ d) $\frac{5^{-2} \times 7^{-4}}{25}$	2
3	Simplify a) $(\frac{-1}{3})^{-2} \times (\frac{3}{-2})^{-3} \times (\frac{2}{5})^{-2}$ b) $\frac{4^0}{5^0 \times 6^0}$	3

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	c) $\frac{25 \times 5^2 \times t^2}{10^3 \times t^4}$	
4	Express the following numbers in the standard form. (a) 0.0000005 (b) 46.789 (c) 6,04,05,002 (d) 0.000000032 e) 1230000000	2
5	Find the number from the expansion given below. (a) $5 \times 10^5 + 7 \times 10^3 + 6 \times 10^2$ (b) $4 \times 10^4 + 1 \times 10^2 + 3 \times 10^0 + 4 \times 10^{-1}$ (c) $7 \times 10^6 + 8 \times 10^5 + 3 \times 10^2 + 9 \times 10^0 + 1 \times 10^{-2} + 2 \times 10^{-3}$	2
	<u>*Section –C *</u>	
1	Simplify a) $(-2)^{-3} \times 5^3 \times (-3)^4 \times 3^{-4}$ $125 \times 2^4 \times 64$	3