# HANDOUT MODULE 2/3

CLASSS 8. MATHEMATICS

EXPONENTS AND POWERS

1Law of exponents ,for " a" is non zero integers ,m,n are whole numbers

$a^m \times a^n = a^{m+n}$

$a^m \div a^n = a^{m-n}$

$(a^n)^m = a^{nxm}$

$a^m \times b^m = (axb)^m$

$a^m \div b^m = (a/b)^m$

2.Validation of laws of exponests for negative powers

3, Laws of exponents

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4.Solving problems by apply laws of exponents for negative powers

5) Solving problems of mixed powers

6) $a^n = 1$ for n = 0 This will work for any "a" except a = 1 o r a = -1

for a=1 , $1^2 = 1^3 = 1^4 = 1^5$ ..... = 1

for a = -1, $(-1)^2 = (-1)^4 = (-1)^6 = (-1)^8 = (-1)^{10} =$ ..... $(-1)^p = 1$

Where p an even integer