



NAME OF THE STUDENT :

CLASS : 7 SEC :

ROLL NO:



DATE : 08.08.2018

TOPIC: EXPONENTS

WORKSHEET NO: 04

S.NO.	QUESTIONS
1	Express 729 as a power of 3.
2	Which one is greater? (i) 3^4 or 4^3 (ii) $(4^2)^3$ or $(4^2) \times 3$
3	Express each of the following numbers as a product of powers of prime factors: (i) 250 (ii) 3125 (iii) 6561
4	Express the following as a single exponent: (i) $(3^4)^5$ (ii) $[(-10)^3]^6$ (iii) $(7^3)^{50}$ (iv) $(5^7)^3$
5	Simplify and express the result in an exponential form: (i) $2^7 \div 2^5$ (ii) $a^7 \div a^3$ (iii) $(-3)^5 \div (-3)^2$ (iv) $(-5)^{110} \div (-5)^{109}$ (v) $10^9 \div 10^3$ (vi) $(2^{20} \div 2^{15}) \times 2^3$ (vii) $[(-4)^3 \times (-4)^5] \div [(-4)^2 \times (-4)^3]$
6	Simplify and express the result in an exponential form: (i) $\left(\frac{4}{7}\right)^5 \times \left(\frac{7}{2}\right)^5$ (ii) $\left(-\frac{8}{15}\right)^4 \times \left(\frac{15}{4}\right)^4$ (iii) $(3^0 + 4^0) \div 7^0$ (iv) $3^0 \times 4^0 \times 5^2$ (v) $(3^0 + 4^0) \times 5^0$ (vi) $\frac{2^3 \times 3^5 \times 8}{27 \times 36}$ (vii) $\frac{9^3 \times a^5 \times b^2}{3^6 \times a^6 \times b}$ (viii) $\frac{2^5 \times 10^4 \times 25}{5^5 \times 2^7}$
7	Write the following in exponential form with base as prime number: (i) $15 \times 15 \times 15 \times 15 \times 15$ (ii) $12 \times 27 \times 16$
8	Simplify and express the answer in the exponential form: (i) $(2^3)^2 \times 3^6 \times 7^6$ (ii) $[(3^2)^3 \times 15^6] \div 5^6$ (iii) $4^4 \div 2^6$ (iv) $(3^5 \times 10^5 \times 25) \div (5^7 \times 6^5)$
9	Express the following numbers in the standard form: (i) 56,730 (ii) 1,469,600,000,000 (iii) 50409.535
10	Write the numbers in the usual form: (i) 3.45×10^4 (ii) 1.231×10^3 (iii) 24×10^5 (iv) 1.5×10^2
11	Find the value of x if : (i) $2^x = 64$ (ii) $2^x \div 2^3 = 2^5$ (iii) $3^x = 9^2$ (iv) $2^3 \times (-3)^3 = (-6)^x$ (v) $\left(\frac{3}{4}\right)^7 \times \left(\frac{3}{4}\right)^{12} = \left(\frac{3}{4}\right)^x$
12	Simplify the following: (i) $(2^2)^4 \div (2^3)^2$ (ii) $\frac{4^3 \times 7^3}{2^8 \times 98}$

PRACTICE WORK	
S.NO.	QUESTIONS
1	Express these numbers in exponential form: (i) 125 (ii) 243 (iii) 288 (iv) 1000 (v) $\frac{-8}{27}$ (vi) $\frac{1}{196}$ (vii) $\frac{27}{125}$ (viii) $\frac{216}{343}$ (ix) $(-21)^{10} \times (-21)^3$ (x) $\{(-25)^{19} \div (-25)^{16}\} \times (-25)^{42}$ (xi) $\left(\frac{17}{31}\right)^{20} \div \left(\frac{17}{31}\right)^{11}$ (xii) $\left(\frac{-9}{14}\right)^3 \times \left(\frac{-9}{14}\right)^6$
2	Evaluate the following: (i) 2^6 (ii) $(-6)^4$ (iii) $\left(1 - \frac{2}{3}\right)^5$ (iv) $\left(\frac{-1}{2}\right)^3 \times \left(\frac{-1}{3}\right)^4$ (v) $\left(\frac{-2}{3}\right)^3 \times \left(\frac{3}{2}\right)^5 \div \left(\frac{3}{2}\right)^2$
3	If $\left(\frac{10}{11}\right)^8 \times \left(\frac{10}{11}\right)^5 = \left(\frac{10}{11}\right)^m$, find the value of m.
4	By what number should 4^5 be multiplied to get 4^8 ?