CLASS NOTES	
Class: VIII	Topic: WORKSHEET BASED ON CH.12 EXPONENTS AND POWERS
Subject: Mathematics	

WORKSHEET
CH. 12. EXPONENTS AND POWERS

Multiple Choice Questions (MCQs)

1. Which one is greatest?

(a) 2^3

(b) 3^2

(c) 1^8

(d) 4^2

2. The exponent in the expression 3^7 is ....

(a) 1

(b) 7

(c) 0

(d) 3

3. The value of 3° is ....

(a) 0

(b) 3

(c) 1

(d) None of these

4. Multiplicative inverse of $\frac{1}{7}$ is ....

(a) 49

(b) 5

(c) 7

(d) -14

5. Fill in the blank: $a^m \div a^n$ = a to the power of.......... Where m and n are natural number:

(a) mn

(b) m + n

(c) m – n

(d) m ÷ n

6. The value of $\frac{1}{3^2}$ is equal to ....

(a) $\frac{1}{9}$

(b) 1

(c) -6

(d) $\frac{1}{3}$

7. In simplified form (3° + 4° + 5°)° is equals to:

(a) 12

(b) 3

(c) 12

(d) 1

8. The approximate distance of moon from the earth is 384467000 m and in exponential form this distance can be written as ....

(a) 3.84467×10^8 m

(b) 384467×10^{-8} m

(c) 384467×10^{-9} m

(d) 3.84467×10^{-3} m

9. 7×10^{-5} m is the standard form of which of the following ....

(a) 0.0007 m

(b) 0.000007 m

(c) 0.0000007 m

(d) 0.00007 m

10. The expression, $(5^2 + 7^2 + 3^2)^0$ is equals to:

(a) 15^6

(b) -6

(c) 1

(d) 83

11. The value of $(6^{-1} - 8^{-1})^{-1}$ is:

(a) $\frac{-1}{12}$

(b) -2

(c) $\frac{1}{24}$

(d) 24

12. The value of $\left\{ 6^{-1} + \left(\dfrac{3}{2} \right)^{-1} \right\}^{-1}$ **is:**

(a) $\frac{2}{3}$

(b) $\frac{5}{6}$

(c) $\frac{6}{5}$

(d) None of these

13. The value of $\left[\dfrac{-1}{2} \right]^{-6}$ is:

(a) -64

(b) $\frac{-1}{64}$

(c) $\frac{1}{64}$

(d) 64

14. The value of $(3^2 - 2^2) \times \left(\dfrac{2}{3} \right)^{-3}$ is:

(a) $\frac{45}{8}$

(b) $\frac{135}{8}$

(c) $\frac{8}{135}$

(d) $\frac{8}{45}$

15. If $\left(\dfrac{4}{9}\right)^4 \times \left(\dfrac{4}{9}\right)^{-7} = \left(\dfrac{4}{9}\right)^{2x-1}$, then the value of x is:

(a) -1

(b) $\dfrac{1}{2}$

(c) $\dfrac{-1}{2}$

(d) None of these

Answer these

1. Express 729 as a power of 3.

2. Simplify and write in exponential form of $(-4)^{100} \times (-4)^{20}$

3. Simplify:

$$(3)^{-5} \times \left(\dfrac{1}{3}\right)^2 \times \left(\dfrac{1}{3}\right)^{-8}$$

4. Simplify:

$$\left[\left(\dfrac{2}{7}\right)^{-2}\right]^4 \times \left[\left(\dfrac{7}{2}\right)^4\right]^{-2}$$

5. If $3^x = 243$, then find the value of x.

6. Simplify:

$$\dfrac{5^{-3} \times 6^{-5} \times 81 \times 4}{3^{-7} \times 10^{-3}}$$

7. Find the value of x if $(-3)^{3x+1} \times (-3)^4 = (-3)^8$

8. Express the height of bundle of 500 papers placed on each other if thickness of one paper is 0.0016 cm, in standard form.