

CHAPTER 5
EXPONENTS
WORKSHEET

1. Express 729 as a power of 3.
 - (a) 3^8
 - (b) 3^6
 - (c) 9^3
 - (d) none of these
2. The value of $(-1)^{55}$ is:
 - (a) -1
 - (b) 1
 - (c) 0
 - (d) none of these
3. The value of $(-1)^{500}$ is:
 - (a) -1
 - (b) 1
 - (c) 0
 - (d) none of these
4. Simplify and write in exponential form of $2^2 \times 2^5$
 - (a) 2^3
 - (b) 2^7
 - (c) 128
 - (d) none of these
5. Simplify and write in exponential form of $(-4)^{100} \times (-4)^{20}$.
 - (a) $(-4)^{120}$
 - (b) $(-4)^{80}$
 - (c) $(-4)^{2000}$
 - (d) none of these
6. The exponent in the expression 3^7 is
 - (a) 1
 - (b) 7
 - (c) 0
 - (d) 3
7. The value of 3^0 is
 - (a) 0
 - (b) 3
 - (c) 1
 - (d) none of these

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

- (a) 49
- (b) 5
- (c) 7
- (d) -14

9. Fill in the Blank $a^m \div a^n = a^{\dots}$ Where m and n are natural numbers:-

- (a) mn
- (b) m + n
- (c) m - n
- (d) m ÷ n

10. Express $(2a)^4$ in exponential form.

- (a) $4a^3$
- (b) $16a^4$
- (c) $2a^4$
- (d) $8a^4$

11. In simplified form $(3^0 + 4^0 + 5^0)^0$ is equals to:

- (a) 12
- (b) 3
- (c) 12
- (d) 1

12. Fill in the blank: $(-1)^{\text{even number}} = \dots$

- (a) $2 \times (-1)$
- (b) 1
- (c) 0
- (d) -13

13. Fill in the blank: $(-1)^{\text{odd number}} = \dots$

- (a) 1
- (b) -1
- (c) 2
- (d) 0

14. Value of $(3^0 + 2^0) \times 5^0$ is

- (a) 1
- (b) 25
- (c) 2
- (d) 0

15. The Base in the expression 8^{10} is

- (a) 10
- (b) 2

(c) 8

(d) 800

16. **64** in exponential form is(a) 2^6 (b) 16^2 (c) $\frac{1}{8^2}$ (d) 2^4 17. **1024** in exponential form is(a) 2^6 (b) 16^2 (c) $\frac{1}{8^2}$

(d) none of these

Fill In The Blanks



18.

$$\left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) = \left[\dots \right]^4$$

19. $(-3)^3 \times (-3)^4 = \dots$

20. What power 2 is 32?

21. Value of $\left[\left(\frac{2}{3}\right)^2\right]^3$ is**Very Short Answer Type Questions**

22. Find the value of:

a) $2^\circ \times 3^\circ \times 4^\circ$ b). $(7^\circ \div 30) \times (8^\circ - 5^\circ)$ c). $4^\circ \times 6^\circ + 100^\circ$

23. Evaluate:

a. Find the value of x:

$$\left(\frac{-7}{5}\right)^{11} \div \left(\frac{-7}{5}\right)^3 = \left(\frac{-7}{5}\right)^{2x+2}$$

b. Find the value of a:

$$\left[\left(\frac{3}{13}\right)^8\right]^3 = \left(\frac{3}{13}\right)^{a+1}$$

c. Find the value of x:

$$5\left\{\frac{2}{5}\right\} = 5^x$$

$$(2^6 \div 2^{-3}) \times 2^{14} = 2^x$$

24. Find m for the following:

$$(a) \left(\frac{8}{9}\right)^5 \times \left(\frac{9}{4}\right) = (2)^m$$

$$(b) (7)^3 \div (2)^m = \left(\frac{7}{2}\right)^3$$

