

INTERNATIONAL INDIAN SCHOOL

BURAI DAH

Worksheet For The Academic Year 2024-25

CLASS: VIII SUBJECT: Mathematics DATE: 02/01/2025

LESSON-12 Exponenets & Powers

1) In 7^2 , 7 is called the _____ and 2 is the power/exponent.

2) Find the value of :

(i) 2^3 (ii) 4^{-2} (iii) 7^0 (iv) $(\frac{3}{5})^3$ (v) $(\frac{2}{3})^{-2}$

3) Write the multiplicative inverse of:

(i) 2^5 (ii) 7^{-2} (iii) 10^7 (iv) 5^{-3}

4) Write the expanded exponential form of:

(i) 756.834 (ii) 405.79 (iii) 123.4567

5) Simplify:

(i) $3^4 \times 3^{-2}$ (ii) $2^{11} \div 2^{20}$ (iii) $(-79)^8 \div (-79)^3$ (iv) $(7^2)^3$

(v) $2^3 \times 5^3$ (vi) $5^2 \div 10^2$

6) Find the value of x :

(i) $2^{5x} \div 2^x = 2^4$ (ii) $5^x \div 5^2 = 25$ (iii) $(2^2)^x \times (2^3)^4 = 2^{10}$

7) Evaluate:

(i) $(2^{-1} \times 5^{-1})^{-1} \div 4^{-1}$ (ii) $(3^{-1} \div 4^{-1})^2$ (iii) $(\frac{-7}{8})^0 \times (\frac{3}{4})^{-3} \times (\frac{2}{3})^{-2}$

(iv) $(\frac{-1}{4})^{-3} \div (\frac{3}{8})^{-2}$

8) Express in the standard form:

(i) 900000000 (ii) 10700000 (iii) 0.000756 (iv) 0.000000129

(v) 163100500000 m (vi) 0.00000007

9) Evaluate:

(i) $(7^{-1} + 3^{-2} + 6^{-2})^0$ (ii) $(8^0 + 7^{-1}) \times 2^3$ (iii) $(3^{-1} \times 4^{-1}) \div 6^{-2}$

10) Write in the usual form:

(i) $6 \times 10^2 + 1 \times 10^1 + 7 \times 10^0 + 5 \times 10^{-1} + 7 \times 10^{-2}$

(ii) $9 \times 10^3 + 3 \times 10^{-2} + 4 \times 10^{-3}$

11) Simplify and express the result with positive exponents

(i) $6^{-3} \times (-5)^{-3}$ (ii) $(\frac{1}{4^{-3}})^3$ (iii) $3^5 \times (\frac{5}{3})^7$

12) Simplify:

(i) $3^{-5} \times 10^{-5} \times 5^3$ (ii) $3^{-5} \times 10^{-4} \times 5^4$ (iii) $4^{-2} \times 5^3$

$$5^{-7} \times 6^{-5} \times 5^5$$

$$5^2 \times 6^{-5}$$

$$2^{-6} \times 5$$