

Subject: - Mathematics

PRACTICE PAPER

CBSE-8th

Topic: - Exponents & Powers

1. Simplify:

i) $(2^{-1}) \div (5^{-1})^2 \times \left(-\frac{5}{8}\right)^{-1}$

Ans. - 10

2. By what no. should 5^{-1} be multiplied so that the product may be equal to $(-7)^{-1}$?

Ans. - $\frac{5}{7}$

3. If $x = \left(\frac{3}{2}\right)^2 \times \left(\frac{2}{3}\right)^{-4}$, find the value of x^{-2} .

Ans. $\left(\frac{2}{3}\right)^{12}$

4. Simplify: -

i) $\left\{\left(\frac{2}{3}\right)^2\right\}^3 \times \left(\frac{1}{3}\right)^{-4} \times 3^{-1} \times 6^{-1}$

Ans. $\frac{32}{81}$

5. Express $\left\{\left(\frac{3}{2}\right)^4\right\}^{-2}$ rational numbers with a positive exponent.

Ans. $\left(\frac{2}{3}\right)^8$

6. By what number should $\left(-\frac{3}{2}\right)^{-3}$ be divided so that the quotient may be $\left(\frac{4}{27}\right)^2$?

Ans. $-\frac{27}{2}$

7. Find m so that $\left(\frac{2}{9}\right)^3 \times \left(\frac{2}{9}\right)^{-6} = \left(\frac{2}{9}\right)^{2m-1}$

Ans. $m = -1$

8. Express the number appearing in the following statements in standard form:

i) Charge of an electron is 0.00000000000000000016 coulombs. **Ans. $1.6 \times 10^{-18} \text{ C}$**

ii) 1 micron is equals to $\frac{1}{1000000}$ metre.

Ans. 10^{-6} metre

9. If the diameters of the Sun and the Earth are 1.4×10^9 metres and 1.275×10^7

metres respectively. Compare these two.

Ans. 100(approx.)

10. The size of a red blood cell is 0.000007 m and the size of a plant cell is

0.00001275 m. Compare these two.

Ans. 0.5(approx.)