

MATHS ASSIGNMENT

CLASS – VIII

CH – 12(Exponents and Powers)

1. Express 5^{-1} as a rational number.
2. Evaluate: $(4^{-1} + 8^{-1}) \div \left(\frac{2}{3}\right)^{-2}$
3. Write the multiplicative inverse of $\left(\frac{1}{2}\right)^4 \div \left(\frac{1}{3}\right)^4 + \left(-\frac{1}{2}\right)^3$
4. Find the value of m if $\left(\frac{2}{3}\right)^3 \times \left(\frac{2}{3}\right)^{-6} = \left(\frac{2}{3}\right)^{2m-1}$
5. If $3^{2x+1} \div 9 = 27$, find x .
6. If $x = \left(\frac{5}{8}\right)^{-2} \times \left(\frac{12}{15}\right)^{-2}$, then find the value of x^{-3} .
7. Simplify: $(2^{-1} \div 5^{-1})^2 \times \left(-\frac{5}{8}\right)^{-2}$
8. What is the area of a rectangle with length 3^3 metres and width of 9^{-2} metres?
9. What is the value of \square in the given equation: $\frac{x^{-2}}{x^{\square}} = \frac{1}{x^{12}}$.
10. The thickness of a soap bubble is about 0.000004 metres. Write the thickness in scientific notation.
11. Simplify: $(6^{-1} - 8^{-1})^{-1} + (2^{-1} - 3^{-1})^{-1}$.
12. If $\frac{p}{q} = \left(\frac{3}{2}\right)^{-2} \div \left(\frac{6}{7}\right)^0$, find the value of $\left(\frac{p}{q}\right)^{-3}$
13. Find x so that $\left(\frac{2}{3}\right)^{-3} \times \left(\frac{2}{3}\right)^{-9} = \left(\frac{2}{3}\right)^{2x+1}$
14. Evaluate: $(5^{-1} \div 4^{-1}) \times 4^{-1}$
15. By what number should $(4)^{-3}$ be multiplied so that the product becomes $\frac{1}{16}$?