1. Write the standard form of 7615240000.

2. Write the multiplicative inverse of 100^{-10}.

3. Simplify: $3^0 + 6^0 + 5^0$.

4. Write 5.6×10^{-6} in usual form.

5. Write the exponential expanded form of 52642.

6. Simplify using laws of exponents:

   (a) $\left(2^{-1} \div 7^{-1}\right)^3 \times \left(\frac{-7}{8}\right)^{-1}$ (b) $\left\{\left(\frac{1}{4}\right)^{-2} + \left(\frac{1}{2}\right)^{-1} + \left(\frac{3}{4}\right)^{-1}\right\}^{-1}$

7. Determine the value of ' x '

   $3^{\frac{1}{3}} \times 3^{\frac{1}{6}} = 3^{-x}$.

8. By what number should 5^{-3} be multiplied so that the product is 125?

9. Find the value of 'x' if:

   (a) $\left(5^{3x} + 10\right) \div 15 = 9$ (b) $\left(\frac{3}{5}\right)^{2x} \times \left(\frac{9}{25}\right)^3 = \left(\frac{3}{5}\right)^{-2}$

10. If the diameter of the Sun and the Earth are 1.4×10^9 metres and 1.275×10^7 metres respectively. Compare these two.

11. If $\frac{p}{q} = \left(\frac{4}{9}\right)^{-3} \div \left(\frac{4}{9}\right)^{-2}$, find $\left(\frac{p}{q}\right)^{-1}$.

12. Evaluate :

    (a) $\left\{48^{-2} \times 25^{\frac{1}{2}}\right\} \div 6^{-1}$ (b) $4 \times 64^{\frac{-1}{2}} \times \left[64^{\frac{1}{2}} + 64^{\frac{3}{2}}\right]$

13. Simplify using laws of exponents:

    $\left[5\left(8^{\frac{1}{3}} + 27^{\frac{1}{3}}\right)\right]^4$

14. Evaluate: $\frac{\left[\left(3^2\right)^7 \div 3^8\right] \times 3^{-4}}{3^6 \times 729}$