St. Andrews Scots Sr. Sec. School

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Session:2025-26

Worksheet

Class: VIII	Subject: Mathematics	Topic: Exponent And Power	Worksheet 4

Question 1. Evaluate:

(i) 3^{-2}

(ii) $(-4)^{-2}$

Question 2. Simplify and express the result in power notation with a positive exponent.

(i) $(-4)^5 \div (-4)^8$ (ii) $\left(\dfrac{1}{2^3}\right)^2$

(iii) $(-3)^4 \times \left(\dfrac{5}{3}\right)^4$ (iv) $(3^{-7} \div 3^{-10}) \times 3^{-5}$

(v) $2^{-3} \times (-7)^{-3}$

Question 3. Find the value of

(i) $(3^0 + 4^{-1}) \times 2^2$

(ii) $(2^{-1} \times 4^{-1}) \div 2^{-2}$

(iii) $\left(\dfrac{1}{2}\right)^{-2} + \left(\dfrac{1}{3}\right)^{-2} + \left(\dfrac{1}{4}\right)^{-2}$

(iv) $(3^{-1} + 4^{-1} + 5^{-1})^0$

(v) $\left\{\left(\dfrac{-2}{3}\right)^{-2}\right\}^2$

Question 4.
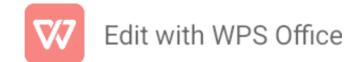
(i) $\dfrac{8^{-1} \times 5^3}{2^{-4}}$ (ii) $(5^{-1} \times 2^{-1}) \times 6^{-1}$

Question 5. Find the value of m for which $5^m \div 5^{-3} = 5^5$.

Question 6.

(i) $\left\{\left(\dfrac{1}{3}\right)^{-1} - \left(\dfrac{1}{4}\right)^{-1}\right\}^{-1}$

(ii) $\left(\dfrac{5}{8}\right)^{-7} \times \left(\dfrac{8}{5}\right)^{-4}$

Question 7. Simplify:

(i) $\dfrac{25 \times t^{-4}}{5^{-3} \times 10 \times t^{-8}}$ $(t \neq 0)$

(ii) $\dfrac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$