

# St. Andrews Scots Sr. Sec. School

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Session: 2026-27

<b>Class: VIII</b>	<b>Subject: Mathematics</b>	<b>Topic: Exponents And Power</b>	<b>Worksheet - 05</b>
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## Do as Directed

Q1. Identify the greater number in each of the following:

(i)  $2^5$  or  $5^2$

(ii)  $3^4$  or  $4^3$

Q2. Evaluate:

(i)  $\frac{5^4 \times 7^5 \times 2^9}{8 \times 49 \times 5^2}$       (ii)  $\frac{15^4 \times 18^3}{3^3 \times 5^2 \times 12^2}$

Q3. Express the following in standard form:

(i) 8,19,00,000

(ii) 5,94,00,00,00,000

(iii) 6892.25

Q4. Find the value of:

(i)  $(-1)^{1000}$

(ii)  $(1)^{250}$

Q5. Express 500 as a product of powers of its prime factors.

Q6. Simplify the following and write in exponential form:

(i)  $(5^2)^3$

(ii)  $(2^3)^3$

(iii)  $(a^b)^c$

Q7. Solve:

If  $\frac{p}{q} = \left(\frac{3}{2}\right)^2 + \left(\frac{9}{4}\right)^0$ , find the value of  $\left(\frac{p}{q}\right)^3$ .

Q8. Simplify and write in exponential form:

(i)  $\left(\frac{3^5}{3^2}\right) \times 3^{10}$       (ii)  $8^2 \div 2^3$

Q9. Find the value of k in each of the following:

$$(i) \left(\frac{2}{3}\right)^3 \times \left(\frac{2}{3}\right)^6 = \left(\frac{4}{9}\right)^{2k-3}$$

$$(ii) \left(-\frac{4}{5}\right)^2 \times \left(\frac{4}{5}\right)^5 = \left(\frac{4}{5}\right)^{6k+1}$$

Q10. Find the value of

$$(a) (8^0 - 2^0) \div (8^0 + 2^0)$$

$$(b) (2^0 + 3^0 + 4^0) - (4^0 - 3^0 - 2^0)$$