

Name:		Subject: Math
Date: February		Supplementary Sheet
Grade: 7		Lessons : Powers

I. Write the following expressions in the form of a product of 2 powers.

$$A = 2^5 \times 2^7 \times 3^{10} \times 3^5$$

$$B = 5^2 \times 25 \times 16 \times 4^3$$

$$C = (2^2)^3 \times 6^2 \times 9 \times 8$$

$$D = (a^3 \times b^2)^5 \times (a^4)^2 \times (b^2)$$

II. Given the following expressions:

$$A = 27^2 \times 9 \times 3^2$$

$$B = \frac{10^2 \times (25 \times 8)^2}{4^2 \times 125^2}$$

$$C = \left(\frac{15}{3}\right)^4 \times \left(\frac{3^3}{3^2}\right)^4 \times \left(\frac{5^3}{5^2}\right)^2 \times \left(\frac{125}{25}\right)^4$$

- 1) Show that A can be written in the form of a single power.
- 2) Prove that $B = 2^4$
- 3) Show that C can be written in the form of $3^x \times 5^y$ where x and y are integers to be determined.
- 4) Write the following expressions in the form of one power:

a) $A \times B$

b) $\frac{A \times B}{C}$