Powers Revision

I. Find the missing exponent.

a. $25 = 5^{\cdots}$ d. $81 = 9^{\cdots}$

b. $16 = 2^{\cdots}$ e. $81 = 3^{\cdots}$

c. $16 = 4^{\cdots}$ f. $125 = 5^{\cdots}$

II. Write as a power of one number.

$2^4 \times 2$ $11^7 \times 11^9$ $6^3 \times 6^0$

$5^3 \times 5^2$ 11×11^9 $4^2 \times 4^9$

III. Write as a power of one number.

a. $7 \times 7^5 \times 7^3$

b. $\left(\frac{4}{5}\right)^2 \times \left(\frac{4}{5}\right)^4$

c. $2.3^7 \times 2.3^5 \times 2.3^8$

IV. Find the value of n.

a. $9^n \times 9^{10} = 9^{10}$

b. $21^{12} \times 21^n = 21^{24}$

c. $14^n \times 14^5 = 14^8$

d. $2^5 \times 2^3 \times 2^2 = 2^n$

e. $\left(\frac{2}{3}\right)^2 \times \left(\frac{2}{3}\right)^n \times \left(\frac{2}{3}\right)^5 = \left(\frac{2}{3}\right)^{10}$

f. $10^n \times 10^8 = 10^{18}$

V. Write each number as a^n.

a. $(3^4)^2$ b. $(10^3)^5$ c. $(7^3)^4$ d. $(6^2)^3$

VI. Write each number as a power of 2 or as a power of 3.

a. 4^3 c. 9^3 e. 16^5

b. 8^3 d. 27^3 f. 81^5

LIVEWORKSHEETS