

Name: _____

Exponents

A **power** =

a number written as
a base number with an exponent.

base **exponent**

Like this:

2^5 say 2 to the 5th power

2^2 say 2 to the 2nd power or two squared

MOST mathematicians say **two squared**

$2^2 = 2 \times 2 = 4$

2^3 say 2 to the 3rd power or two cubed

MOST mathematicians say **two cubed**

$2^3 = 2 \times 2 \times 2 = 8$

1- CHANGE THE FOLLOWING MULTIPLICATION EXPRESSIONS INTO EXPONENTS:

1) $5 \times 5 \times 5 =$ _____	2) $4 \times 4 \times 4 \times 4 \times 4 \times 4 =$ _____
3) $7 \times 7 \times 7 \times 7 \times 7 =$ _____	4) $8 \times 8 =$ _____
5) $2 \times 2 \times 2 \times 2 \times 2 =$ _____	6) $9 =$ _____
7) $11 \times 11 \times 11 \times 11 =$ _____	8) $6 \times 6 =$ _____
9) $3 \times 3 =$ _____	10) $5 \times 5 =$ _____

2- COMPLETE:

NUMBER	BASE	EXPONENT	EXPANDED NOTATION
4^3			
	7	4	
	4	7	
5^4			

3- FIND THE VALUE OF EACH EXPRESSION:

1) $7^2 = \underline{\hspace{2cm}}$

2) $5^5 = \underline{\hspace{2cm}}$

3) $10^3 = \underline{\hspace{2cm}}$

4) $2^{11} = \underline{\hspace{2cm}}$

5) $6^0 = \underline{\hspace{2cm}}$

6) $6^3 = \underline{\hspace{2cm}}$

7) $3^1 = \underline{\hspace{2cm}}$

8) $100^2 = \underline{\hspace{2cm}}$

9) $3^3 = \underline{\hspace{2cm}}$

10) $6^5 = \underline{\hspace{2cm}}$

11) $2^5 = \underline{\hspace{2cm}}$

12) $10^7 = \underline{\hspace{2cm}}$

4- COMPLETE:

Exponent Form	Expanded Form	Standard form
10^4		
10^7		
	$10 \times 10 \times 10 \times 10 \times 10 \times 10$	
		10,000