

U2: LI Powers & Roots



2×3

Multiplication is making groups of equal numbers.



$3 + 3$ Adding the same # together is the same thing as multiplication.

We can write $5 + 5 + 5 + 5$ as ...

5×4

How do we write $8 + 8 + 8 + 8 + 8$?

8×5

How do you think we write $7 \times 7 \times 7$?

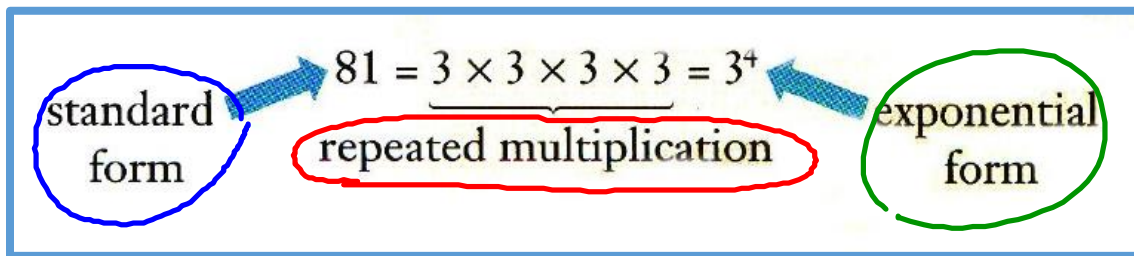
~~7×3~~

7^3

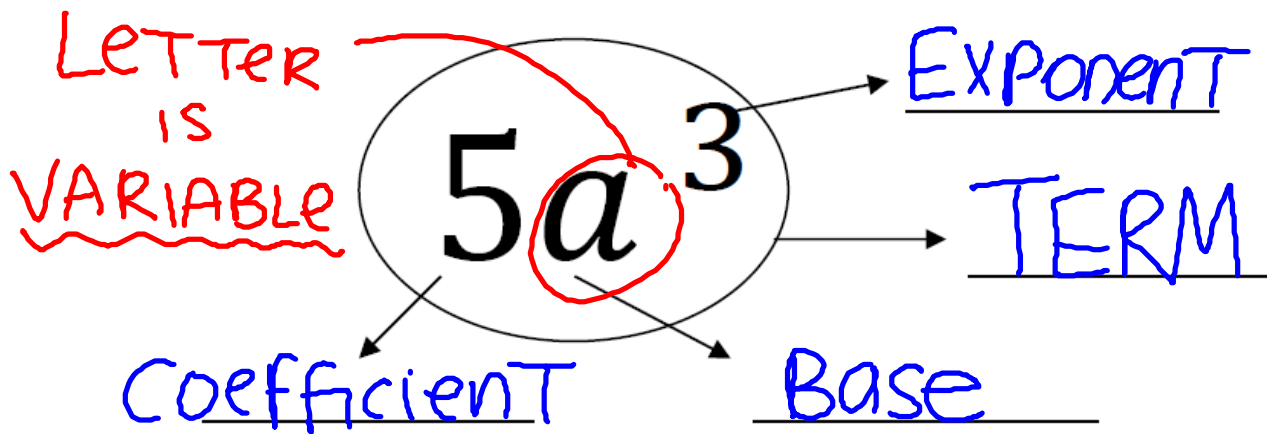
This is read as "seven to the power of three"

The number "7" tells us which number is REPEATED

The little number "3" tells us how many times "7" is repeated



STANDARD FORM	"answer" or TOTAL VALUE
REPEATED MULTIPLICATION	the expression written in full
EXPONENTIAL FORM	big # and little # in Top corner



BASE	what the exponent is attached to
EXPONENT	the little guy
COEFFICIENT	number beside the letter (variable)
TERM	Everything mashed together.

For the following terms, name the base, exponent and coefficient:

	BASE	EXPONENT	COEFFICIENT
$3m^6$	m	6	3
$9f^5$	f	5	9
$66a^2$	a	2	66
b^{10}	b	10	1
3^7	3	7	
14^t	14	t	

In WORDS!

How do we say this out loud?

NUMBERS	POWER	WORDS
7×7	7^2	Seven to the power of two
$2 \times 2 \times 2$	2^3	two to the power of three
$3 \times 3 \times 3 \times 3$	3^4	Three to the power of four
$4 \times 4 \times 4 \times 4 \times 4$	4^5	four to the power of five

How else can you write $8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8$?

$$8^{16}$$

How else can you write 300^4 ?

$$300 \times 300 \times 300 \times 300$$