Unit 1

# L 5 Exponent Basics

Expanded form : $2\times2\times2\times2\times2\times2\times2 = 128$

Exponential form:

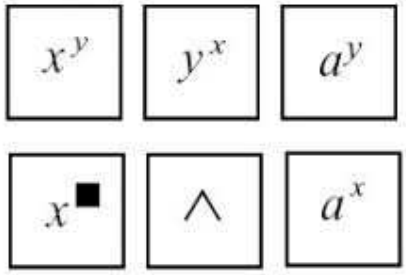
Exponent

Base → $2^7=128$ ← Power

$\therefore\ a^n = a\times a\times \ldots. \times a$ (n times)



## Scientific Calculator Exponent Buttons






Note that:

$a^1 = a$ $\qquad$ $a^0 = 1$

$a^n =$ $\qquad$ **if** the 'a' is negative and 'n' is odd

Ex: $(-2)^3 = (-2)(-2)(-2) = -8$

$(-a)^n = (-a)\times(-a)\times \ldots. \times(-a)$ (n times)

$-a^n = -a\times a\times \ldots. \times a$ (n times)



Ex 1: Expand and evaluate:

a) $7^3 =$

b) $x^4 =$

c) $9^1 =$

d) $5^0 =$

e) $(-8)^4 =$

f) $-8^4 =$

g) $(7)(6)(7)(6) =$



Ex 2: Evaluate:

a) $2 \times 10^3 + 6 \times 10^2 + 7 \times 10 + 3$

b) $\dfrac{2^4 + 5^2}{3^3}$



Practice:
1.2 # 1--9