

## Algebraic Expressions

$$\boxed{5x^3} + 3x^2 + 4x - 8$$

↑            ↑            ↑            ↑  
term    coefficient    variable    constant

- term -  $5x^3$   $3x^2$   $4x$   $-8$

- variable -  $x$

- coefficient  $5$   $3$   $4$

- constant  $-8$

- factors  $5$   $4$   $3$   $x$  - values that are multiplied

## Powers

base  $\rightarrow 2^5 \leftarrow$  exponent

- exponent tells how many times base is used as a factor

$2^5 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$  - Read as 2 to the 5<sup>th</sup> power

examples ①  $3 \cdot 3 \cdot 3 \cdot 3 = 3^4$  ②  $(-2)(-2)(-2) = (-2)^3$   
③  $n \cdot n \cdot n \cdot n \cdot n = n^5$  ④  $12^1 = 12$  ⑤  $7^0 = 1$

- Always use parentheses to raise a negative number to a power  
 $(-8)^2 = (-8)(-8) = 64$   
 $-8^2 = -(8 \cdot 8) = -64$