

# Prime Factorization

Prime numbers: contains only 2 factors, one and itself

Examples  $\rightarrow$  5, 13, 2, 7, 23

Composite number: contains more than 2 factors

Examples  $\rightarrow$  4, 9, 28, 45, 33.

Factors of 12:

12  $\rightarrow$  1, 2, 3, 4, 6, 12

Find the prime factorization of each number

$48$	$\checkmark 48 = 2^4 \cdot 3$	$200x^3y^2$	
^		^	$200x^3y^2 =$
8 6		20 10	$2^3 \cdot 5^3 \cdot x^3 \cdot$
^ ^		^ ^	$y^2$
4 (2)(2)(3)		4 (5)(5)(2)	
^		^ ^	
(2)(2)		(2)(2)	