24

1 x 24
2 x 12
3 x 8
4 x 6

36

1 x 36
2 x 18
3 x 12
4 x 9
6 x 6

24 | 24, 48, 72, 96, 120, 144
36 | 36, 72

LCM

1625

3792

Prime Numbers

Chapter 3

Prime Numbers

* A Prime Number can be divided evenly **only** by 1 & itself.
And it must be a whole number greater than 1.

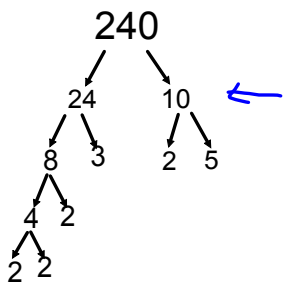
Ex.

The first few prime numbers are 2, 3, 5, 7, 11, 13, 17 etc.....

Determining the Prime Factors of a Whole Number

Write the prime factorization of 240

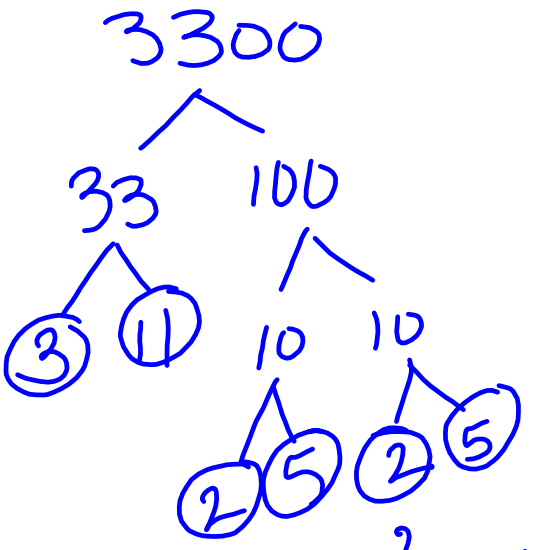
Draw a Factor Tree !!



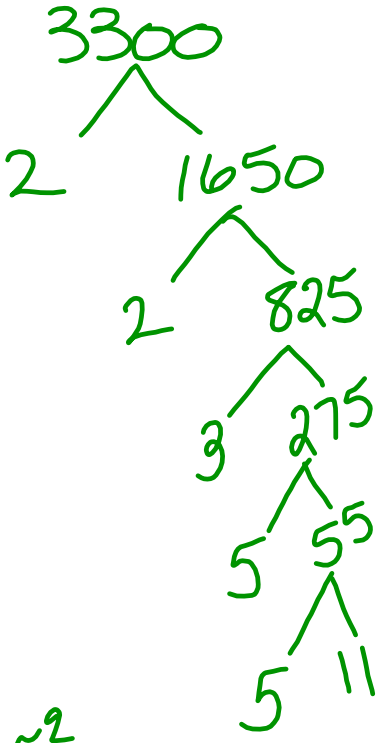
Ex 3300

The Prime Factorization of 240 is:
2 x 2 x 2 x 3 x 5 x 2 or 2^4 x 3 x 5

The Prime Factors of 240 are:
2, 3, & 5



$2^2 \times 3 \times 5^2 \times 11$



$2^2 \times 3 \times 5^2 \times 11$

What is a Common Factor?

We said that .....

The Factors of 132 are : 1, 2, 3, 4, 6, 11, 12, 22, 33, 44, 66, 132

The Factors of 162 are : 1, 2, 3, 6, 9, 18, 27, 54, 81, 162

Using Prime Factors to Solve GCF of Numbers

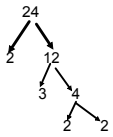
Steps:
1) Find the prime factors of each number

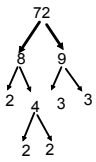
2) Compare the prime factors of each number

3) Circle the prime factors that each number has in common

4) Multiply common prime factors together to get GCF of #'s

Example:
Find the GCF of 24 and 72





2 x 2 x 2 x 3

GCF 24

2 x 2 x 2 x 3 x 3

a) 46

2 23

2 x 23

GCF: 2

84

2 42

2 21

3 7

2 x 2 x 3 x 7

b) 220

22 10

2 11 2 5

2 x 2 x 5 x 11

GCF = 2 x 2 x 5
= 20

860

86 10

43 2 2 5

2 x 2 x 5 x 43

Homework

Exercises

Pg 140

Class/ Homework

A

3 4 a, b, c 5 a, b, c

B

a, c, e 6 7 bde 8 a,c 9 a,c,e 10 11 12 13

14 15 a,d 16 a,d 17 18 19 20

C

21 22