HCF & LCM

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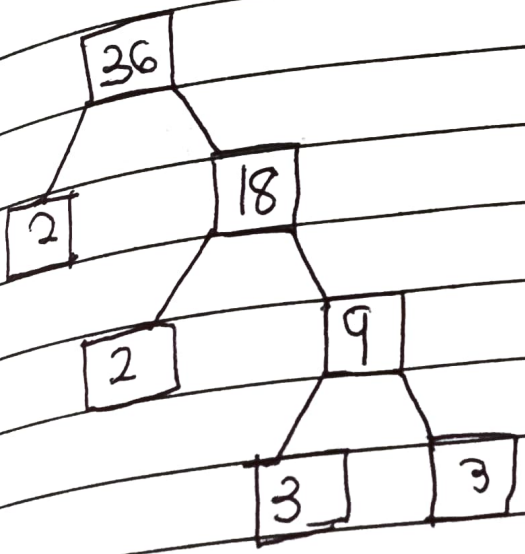
Prime Factorization

Using Factore Trees

- Find the prime factores of 36



$36 = 2 \times 2 \times 3 \times 3$

Using Repeated Division

- Find the prime factore of 36

2	36
2	18
3	9
	3

$36 = 2 \times 2 \times 3 \times 3$

Write the definition of -

* Even Number - Divisible by 2
* Odd Number - Not Divisible by 2
* Prime Number - A natural number that is divisible by 1 and the number itself. e.g. 2, 3, 5, 7 etc.
* Composite Number - A number that has more than two factors. ~~divisible by other number and itself~~. e.g - 4, 6, 8 etc.

Ex-8(A) Evaluation Question:

1. Write all the factores of:

(i) 15

Ans- 1, 3, 5, 15

(ii) 55

1, 5, 11, 55

(iii) 48 — 8 — 24

Ans- 1, 2, 3, 4, 6, 12, 16, 24, 48

(iv) 36

Ans- 1, 2, 3, 4, 6, 9, 12, 18 and 36

(v) 84

Ans- 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42 and 84

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Ex- 8(A)

Q. 2 and 3 in notebook.

2. Write all prime numbers:

(i) less than 25

Ans- 2, 3, 5, 7, 11, 13, 17, 19, 23

(ii) Between 15 and 35

Ans- ~~2, 3, 5~~. 17, 19, 23, 29, 31

(iii) Between 8 and 76

Ans- 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73

3. Write the prime numbers ~~factors of~~ from:

(i) 5 to 45

Ans- 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43

(ii) 2 to 32

Ans- 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31

(iii) 8 to 48

Ans - 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

(iv) 9 to 59

Ans - 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59

4. Write the prime factors of:

(i) 16 × 1 = 16
8 × 2 = 16
4 × 4 = 16
Prime factors of 16 = 1, 2, 4, 8, 16

(ii) Prime factors of 27 = 1, 3, 9, 27

(iii) Prime factors of 35 = 1, 5, 7, 35

(iv) Prime factors of 49 = 1, 7, 49

5. If p_n means prime factors of n, find,

i) P_6 = 1, 2, 3, 6

ii) P_{24} = 1, 2, 3, 4, 6, 8, 12, 24

iii) P_{50} = 1, 2, 5, 10, 25, 50

iv) P_{42} = 1, 2, 3, 6, 7, 14, 21, 42