Day-5

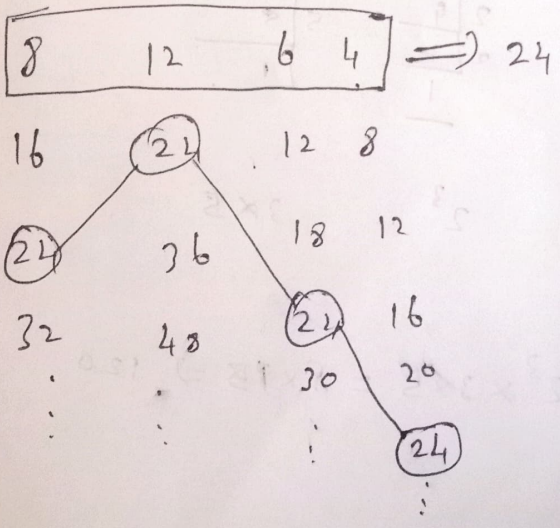
LEAST COMMON MUTLIPLE

LESSON #1 - Introduction

- → Traditional method
- → factorisation
- → short-cut method
- → Long Division

Traditional method

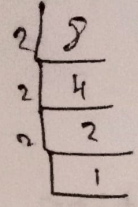
Find LCM for 8, 12, 6, 4?

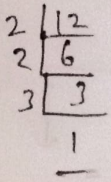


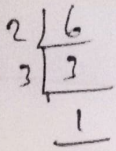
Answer : 24

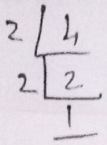
Factorisation method

1) Find Lcm 8, 12, 6, 4







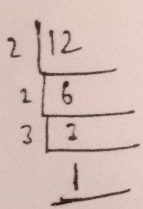


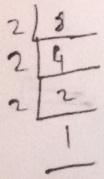
2^3 $\quad 2^2 \times 3 \quad 2 \times 3 \quad 2^2$

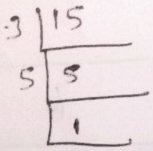
$2^3 \times 3 = 24$ $\quad$ Lcm 24

Ex

Find Lcm 12, 9, 15







$2^2 \times 3 \quad 3^2 \quad 3 \times 5$

$2^3 \times 3 \times 5 = 8 \times 15 \Rightarrow 120$

Long Division method

① Find LCM 8, 12, 6, 4?

2	8, 12, 6, 4
2	4, 6, 3, 2
2	2, 3, 3, 1
3	1, 3, 3, 1
	1, 1, 1, 1

$2^3 \times 3 = 24$

Ex:

2) 12, 8, 15

2	12, 8, 15
2	6, 4, 15
2	3, 2, 15
3	3, 1, 15
5	1, 1, 5
	1, 1, 1

$2^3 \times 3 \times 5 \Rightarrow 120$

SHORT-CUT method

① 8, 12, 6, 4 ? = 12 × 2 ⇒ 24

$\frac{12}{4}$, $\frac{12}{6}$, ~~$\frac{12}{8}$~~ $\frac{24}{12}$, $\frac{24}{8}$, $\frac{24}{6}$, $\frac{24}{4}$

② 12, 6, 24, 8 ? = 24

$\frac{24}{12}$, $\frac{24}{6}$, $\frac{24}{8}$

③ 12, 3, 9 ? = 12 × 2 ⇒ 12 × 3 = 36

(12 × 2 = 24, 12 × 3 = 36)

~~$\frac{12}{9}$~~, $\frac{12}{3}$ | ~~$\frac{24}{9}$~~, $\frac{24}{3}$ | $\frac{36}{9}$, $\frac{36}{3}$

Answer : 36

4) 4, 3, 11, 12 ? = 12 × 11 = 132

(11 → prime no.)

$\frac{12}{3}$, $\frac{12}{4}$