

Day - 1

Divisibility rules

1) Divisibility rule for 5

$5 \rightarrow \frac{\text{---}}{\text{last digit}} \rightarrow 0's$

2	3	4	5	6	7	8
9	10	11	12	13	14	
	15	16	17	18	19	

2) Divisibility rule for 10

$10 \rightarrow \frac{\text{---}}{\text{last digit}} '0'$

3) Divisibility rule for 2

$2 \rightarrow \frac{\text{---}}{\text{last digit}}$ 0 (or)
Even number

4) Divisibility rule for 3 and 9.

3/9

342 like this sum of digits
is

$$342 = 3 + 4 + 2 = \boxed{9}$$

If divisibility by 3

9

$$243243 = 1819 =$$

It is divisibility by 3 @ 9

DIVISIBILITY rules for 4/8 div

DIVISIBILITY rules for 4

* Take the last two digit of a number
is divisibility by 4 like

$$\begin{array}{c} 16 \ 24 \\ \swarrow \quad \searrow \\ 24/4 \end{array}$$

It is divisibility by 4

DIVISIBILITY rules for 8.

* take the last three digit of a number
is divisibility by 8 like

$$\begin{array}{c} 1216 \ 24 \\ \swarrow \quad \searrow \\ 624 \\ 8 \text{ (or) } 4 \end{array}$$

It is divisibility by 8.

DIVISIBILITY rule for 6, 12, 14, 15, 10

~~NOTE~~ when the number is divisibility by
two number

At 6

$$6 \Rightarrow 126/2, 3 \Rightarrow 9/3$$

$12 \Rightarrow 2/3 \Rightarrow$ It is divisibility by 12

$14 \Rightarrow 7/2 \Rightarrow$ It is divisibility by 14

$15 \Rightarrow 5/3 \Rightarrow$ It is divisibility by 15

$18 \Rightarrow 9/2 \Rightarrow$ It is divisibility by 18

E:

At 6 $\rightarrow 8/2 \Rightarrow$ It is divisibility by 2

$1,368 \rightarrow 1+3+6+8=18/3 \Rightarrow$ It is divisible by 3

so, that is divisibility by 6

At 12 $\rightarrow 32/4 \Rightarrow$ It is divisibility by 4

$6,132 \rightarrow 6+1+3+2=12/3 \Rightarrow$ It is divisibility by 3

so, that is divisibility by 12

At 14 $\rightarrow 6/2 \Rightarrow$ It is divisibility by 2

$2,646 \rightarrow$ Take 2646, remove first, last digit (6)

double the (6), next subtract from

the rest $264-12=252$

repeat: remove last digit (2), double

it (4)
subtract from the rest $25-4=21$

is 21 divisible by 7

If it is divisible by 7

At 15

9, 345

$\rightarrow 1+5/5 \Rightarrow$ It is divisible by 5

$\rightarrow 9+3+4+5/3 \Rightarrow 21/3 \Rightarrow$ It is divisible by 3

So, that is divisibility by 15

At 18

5, 832

$\rightarrow 2/2 \Rightarrow$ It is divisible by 2

$\rightarrow 5+8+3+2/9 \Rightarrow 18/9 \Rightarrow$ It is divisible by 9.