

\* Divisibility rule for 13 :-

→ multiply last digit by 4 and adding it to the rest of the digit.

$$728 \rightarrow 8 \times 4 = 32$$

$$72 + 32 = 104 \rightarrow 4 \times 4 = 16$$

$$10 + 16 = 26$$

$$13 \overline{) 26}$$

$\therefore 728$  is divisible by 13.

\* Divisibility rule for 17!

→ multiply last digit by 5 and **subtract** it to the rest of the digits

→ Do this process till number becomes in two digits

→ If the result is divisible by 17

Eg! 1632

$$1632 \rightarrow 2 \times 5 = 10$$

$$163 - 10 = 153$$

$$153 \rightarrow 3 \times 5 = 15$$

$$\therefore 15 - 15 = 0$$
$$\therefore 17 \nmid 1632$$

\* Divisibility rule for 19.

→ multiply last digit by 2 & add the number to rest of the number

→ If the result is divisible by 19 then the number is divisible by 19.

Eg: 12350

$$12350 \rightarrow 0 \times 2 = 0$$

$$1235 + 0 = 1235$$

$$1235 \rightarrow 5 \times 2 = 10$$

$$123 + 10 = 133$$

$$133 \rightarrow 3 \times 2 = 6$$

$$13 + 6 = 19$$

$$19 \mid 19$$

$$\therefore 19 \mid 12350$$

\* Divisibility rule of 23 :-

→ multiply last digit by 7 then add it to the rest of the number

→ If result is divisible by 23 then given number is divisible by 23.

Eg: 10419

$$10419 \rightarrow 9 \times 7 = 63$$

$$1041 + 63 = 1104$$

$$1104 \rightarrow 4 \times 7 = 28$$

$$110 + 28 = 138$$

$$138 \rightarrow 6 \times 7 = 56$$

$$13 + 56 = 69$$

$$23 \overline{) 69}$$

$$23 \overline{) 10419}$$

\* Divisibility rule for 29:-

→ multiply last digit by 3 and add it to the rest of the number  
→ If the result is divisible by 29 then given number is divisible by 29.

Eg: 1827

$$1827 \rightarrow 7 \times 3 = 21$$

$$182 + 21 = 203$$

$$203 \rightarrow 3 \times 3 = 9$$

$$20 + 9 = 29$$

$$29 \overline{) 29}$$
$$\boxed{29 \overline{) 1827}}$$