

## Ex- 9(c)

1) find which of the following numbers are  
divisible by 2:

i) ~~262~~ 352

Ans Yes

ii) 523

Ans No

iii) 496

Ans Yes

iv) 649

Ans No

② Find which of the following number are divisible by 4:

i) 222

Ans No

ii) 532

Ans Yes

iii) 678

Ans No

iv) 44320

Ans Yes

~~② i) 324~~

③ Find the which of the following no. are divisible by 8:

i) 324

Ans No

ii) 2536

Ans Yes

iii) 92760

Ans Yes

iv) 444320

Ans Yes

④ Find which of the following no-s are divisible by 3:

i) 221

Ans No

ii) 543

Ans Yes

iii) 28492

Ans No

iv) 92349

Ans Yes

⑤ Find which of the following numbers are divisible by 9:

i) 1332

Ans Yes

ii) 53247

Ans No

iii) 4968

Ans Yes

iv) 200314

Ans No

Q → 6) Find which of the following no.s are divisible  
by 6:

i) 224

A) 2 → Yes

3 → Yes

So, this no. is divisible by 6.

i) 2010

As by 2 Yes

by 3 Yes

So, this no. is divisible by 6.

ii) 23278

As by 2 Yes

by 3 No

So, this no. is not divisible by 6.

iii) 15505

As by 2 No

by 3 Yes

So, this no. will not be divisible by 6.

7) Find which of the following no.s are divisible by 5:

i) 5080

Ans Yes

ii) 88888

Ans No

iii) 755

Ans Yes

iv) 9207

Ans No

8) Find which of the following no.s are divisible by 10:

i) 9990

Ans Yes

ii) 0

Ans Yes

iii) 847

Ans No

iv) 8976

Ans No

Q) Find which of the following numbers are divisible by 11:

i) 5918

As  $5\textcircled{9}1\textcircled{8} \Rightarrow$  Sum of odd no.s =  $9+8 = 17$

$5\textcircled{9}1\textcircled{8} \Rightarrow$  Sum of even no.s =  $5+1 = 6$

Difference  $\Rightarrow 17 - 6 = 11$

11 is divisible by 11, so, the no. 5918 is divisible by 11.

ii) 68717

As  $6\textcircled{8}7\textcircled{1}7 \Rightarrow$  Sum of odd no.s =  $7+7+6 = 20$

$6\textcircled{8}7\textcircled{1}7 \Rightarrow$  Sum of even no.s =  $8+1 = 9$

Difference =  $20 - 9 = 11$

11 is divisible by 11, so, the no. 68717 is divisible by 11.

iii) 3882

~~As  $3\textcircled{8}8\textcircled{2} =$  Sum of even no.s =  $3+8 = 11$~~

~~$3\textcircled{8}8\textcircled{2} =$  Sum of odd no.s =  $8+2 = 10$~~

~~Difference =  $11 - 10 = 1$~~

As  $3\textcircled{8}8\textcircled{2} = 10 \Rightarrow$  Difference =  $10 - 11 = -1$

$3\textcircled{8}8\textcircled{2} = 11$

-1 is not divisible by 11,

so, ~~3882~~ 3882 is not divisible by 11.

iv) 10857

As  $1\textcircled{0}8\textcircled{5}7 \Rightarrow 1+8+7 = 16$

$1\textcircled{0}8\textcircled{5}7 \Rightarrow 5+0 = 5$

$= 16 - 5 = 11$

So, the no. 10857 is divisible by 11.

10) Find which of the following numbers are divisible by 15:

i) 900

As 5 = Yes

3 = Yes

∴ So, this no. is divisible by 15.

ii) 8295

As 5 = Yes

3 = Yes

∴ So, this no. is divisible by 15.

iii) 10243

As 3 = No

5 = No

∴ So, this no. is not divisible by 15.

iv) 5013

As 5 = No

3 = Yes

∴ So, this no. is not divisible by 15.

11) In each of the following no.s, replace M by the smallest whole no. to make the resulting no. divisible by 3:

i) 84 M 3

$$\begin{aligned} \text{As } 6 + 4 + 3 &= 13 + m \\ &= 13 + 2 \\ &= 15 \end{aligned}$$

$$m = 2$$

$$= 15$$

ii)  $4G \ M \ 4G$

As  $4+6 + 4 + 6 = 8 + 12 + M$

$= 20$   ~~$+ M$~~

$= 20 + M$

$= 20 + 1$

$= 21 \div 7 = 3$

So  $\Rightarrow M = 1$

iii)  $27 \ M \ 53$

As  $2+7 + 5+3 + M$

$= 17 + M$

$= 17 + 1$

$M = 1$   $17 + 1 = 18 \div 3 = 6$



(b) In each of the following numbers, replace M by the smallest whole no. to make the resulting no. divisible by 9.

i)  $76M91$

Q) For a no. to be divisible by 9 so the sum of the digits should be divisible by 9.

$$\begin{aligned} 7 + 6 + M + 9 + 1 &= 23 + M \\ &= 23 + 4 \\ &= 27 \end{aligned}$$

$$M = 4$$

ii) 77548M

$$\begin{aligned} 7 + 7 + 5 + 4 + 8 &= 31 + M \\ &= 31 + 5 \\ &= 36 \end{aligned}$$

$$M = 36$$

iii) 827M9

$$\begin{aligned} 8 + 2 + 7 + 9 + M &= 24 + M \\ &= 24 + 3 \\ &= 27 \end{aligned}$$

$$M = 3$$

13) In each of the following numbers, replace M by the smallest whole no. to make the resulting no. divisible by 11.

i) 39 M 2

A) Sum of odd places =  $2 + 9 = 11$

Sum of even places =  $M + 3 = 11$

$11 - (3 + M) = 11 - 3 - M = 8 - M$

$8 - M = 0$

$M = 8$

∴ So, the required no. is 3982

ii) 3M 422

A) Sum of odd places:  ~~$3 + 4 + 2 + 2 + 4 + M$~~  =  $2 + 4 + 3$

Sum of even places:  $2 + M = 9$

$9 = 9 - (2 + M)$

$= 9 - 2 - M$

$= 7 - M$

$= 7 - 7$

$M = 7$

iii) 70975M

A) Sum of odd places:  ~~$M + 7 + 0$~~

Sum of even places:  ~~$7 + 9 + 7$~~  =  $21$

~~$21 - (M + 7 + 0)$~~

~~$= 21 - M - 7 = 0$~~

~~$= 14 - M = 0$~~

~~$= 14 - 14 = 0$~~

iii)  $7 \oplus 9 \oplus 5 \oplus M$

As Odd  $\rightarrow 0 + 7 + M =$

Even  $\rightarrow 7 + 9 + 5 = 21 = 21 - (7 + M)$   
 $= 21 - 7 - M$

$= 14 - M$

~~$1 + M + 5$~~

$= 14 - 3$

$= 11$

$M = 3$

iv)  $14 \oplus M \oplus 5$

As Odd  $\rightarrow 1 + M + 5 = 6 + M$

Even  $\rightarrow 4 + 7 = 11$

$= 11 - (6 + M)$

$= 11 - 6 - M$

$= 5 - 5 = 0$

$= 0 \Rightarrow M = 5$

14) State true or false

- i) If a no. is divisible by 4, it is divisible by 8. False.
- ii) If a no. is factor of 16 and 24, it is factor of 48. True
- iii) If a no. is divisible by 18, it is divisible by 3 and 6. True
- iv) ~~If a divides~~ If a divides both b and c completely, then a divides (i)  $a+b$  (ii)  $a-b$  also completely. True