HW

Exercise - 9(C)

1. Find which of the following numbers are divisible by 2:
   i) 324
   ii) 523
   iii) 496
   iv) 649

Ans⇒ The numbers 324 and 496 are divisible by 2 because ~~they~~ both the numbers have either 4 or 6 as their units place which satisfies the divisibility rule of 2.

The numbers 523 and 649 are not divisible by 2 because they have either 3 or 9 as their units place. which doesn't satisfies the divisibility rule of 2.

2. Find which of the following numbers are divisible by 4:
   i) 222
   ii) 532
   iii) 678
   iv) 9232

Ans⇒ The numbers 532 and 9232 are divisible by 4 because both the number's ones digit and tens digit is divisible by 4 which satisfies the divisiblity rule of 4.

The numbers 222 and 678 are not divisible by 4 because both the number's ones digit and tens digit is not divisible by 4 which doesn't satisfies the divisiblity rule of 4.

4. Find which of the following numbers are divisible by 3:
i) 221
ii) 543
iii) 28492 4968 28492
iv) 92349

Ans⇒ The numbers 543 and 92349 are divisible by 3 because both the number's sum of digits is divisible by 3 which satisfies the divisibility rule of 3.

The numbers 221 and 28492 are not divisible by 3 because both the number's sum of digits is not divisible by 3 which satisfies divisibity rule of 3.

5. Find which of the following numbers are divisible by 9:
i) 1332
ii) 53247
iii) 4968
iv) 200314

Ans⇒ The numbers 1332 and 4968 are divisible by 9 because both the number's sum of digits is divisible by 9 which satisfies divisibility by 9.

The numbers 53247 and 200314 are not divisible by 9 because the number's sum of digits is not divisible by 9 which doesn't satisfies divisibility rule of 9.

6. Find which of the following numbers are divisible by 6:
i) 324
ii) 2010
iii) 33278
iv) 15505

Ans⇒ The numbers 324 and 2010 are divisible by 6 because both the numbers are divisible by 2 and 3 which satisfies the divisibility rule of 6.

The numbers 33278 and 15505 are not divisible by 6 because both the numbers are not divisible by 2 and 3 which doesn't satisfies the divisibility rule of 6.

7. Find which of the following numbers are divisible by 5:
i) 5080
ii) 66666
iii) 755
iv) 9207

Ans⇒ The numbers 5080 and 755 are divisible by 5 because both the numbers have 0 or 5 as units place which satisfies the divisibility rule of 5.

The number 66666 and 9207 are not divisible by 5 because both the numbers don't have 0 or 5 as units place which satisfies the divisibility rule of 5.

which of

8. Find, the following numbers are divisible by 10:

i) 9990

ii) 0

iii) 847

iv) 8976

Ans⇒ The number 9990 is divisible by 10 because it has 0 as the units place which satisfies the divisibility ~~by~~ rule of 10.

H.W

3. Find which of the the following numbers are divisible by 8:

i) 324

ii) 2536

iii) 92760

iv) 444320

Ans ⇒ The numbers 2536, 92760 and 444320 are divisible by 8 because the hundred's, ten's and one's digit is divisible by 8 which satisfies the divisibility rule of 8.

The number 324 is not divisible ~~is~~ by 8 because the hundred's, ten's and one's digit is not divisible by 8 which doesn't satisfies the divisibility rule of 8.

9. Find which of the following numbers are divisible by 11.

i) 5918

ii) 68,717

iii) 3882

iv) 10857

Ans⇒ The numbers 5918, 68,717 and 10857 are divisible by 11 because the ~~sa~~ difference of their sum of even digits and sum of odd digits is divisible by 11 which satisfies the ~~of~~ divisibility rule of 11.

The number 3882 are not divisible by 11 because the difference of the sum of even digits and sum of odd digits ~~whic~~ is not ~~x~~ divisible by 11 which doesnot satisfies the divisibility rule of 11.

11. i) 64M3

Ans⇒ If the sum of digits of a number is divisible by 3 then the number ~~itself~~ itself is divisible by 3.

The sum of digits = 6+4+3+M

= 13+M

~~The nearest nu~~ The nearest number of 13 which is divisible by 3 is 15.

So, to find the required whole number is

15 - 13 = 2

So, M=2

The number is 6423.

ii) 46M46

If

Ans⇒ ~~If~~ the sum of digits of a number is divisible by 3 then the number is divisible by 3.

The sum of digits = 4+6+4+6+M

= 20+M

The nearest number of 20 which is divisible by 3 is 21.

So, to find the required whole number is

21-20=1

So, M=1

The number is 46146.

iii) 27M53

Ans⇒ If the sum of digits of a number is divisible by 10 then the number is divisible by 3.

The sum of digits = 2+7+5+3+M

= 17+M

The nearest number of 17 which is divisible by 3 is 18.

So, to find the required whole number is

18-17=1

So, M=1

The number is 27153.

12. i) 76 M91

Ans⇒ If the sum of ~~three~~ digits is divisible by 9 then the number is divisible by 9.

The sum of digits = 7+6+9+1+M
= 23+M

The nearest number of 23 divisible by 9 is 27.
So, the required whole number is
27-23=4
So, M=4
The number is 76491.

ii) 77548 M

Ans⇒ If the sum of digits is divisible by 9 then ~~the~~ the number is divisible ~~is~~ by 9.

The sum of digits = 7+7+5+4+8+M
= 31+M

The nearest number of 31 divisible by 9 is 36.
So, the required whole number is
36-31=5
So, M=5
The number is 775485.

iii) 627M9

Ans⇒ If the sum of digits is divisible by 9 then the number is divisible by 9.

The sum of digits = 6+2+7+9+M
= 24+M

The nearest number of 24 divisible by 9 is 27.
So, the required whole number is
27-24=3
So, M=3
The number is 62739.

14.i) If a number is divisible by 4, it is divisible by 8. False

ii) If a number is a factor of 16 and 24, it is a factor of 48. True

iii) If a number is divisible by 18, it is divisible by 3 and 6. ~~False~~ True

iv) If a divides both b and c completely, then a divides i) a+b ii) a-b also completely. True

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

i) 960
ii) 8295
iii) 10243
iv) 5013

Ans⇒ The numbers 960 and 8295 are divisible by 15 because the sum of digits is divisible by 3 which makes them divisible and the unit's place is 0 or 5 which makes them divisible by 5 and satisfies the divisibility rule of 15.

The numbers 10243 and 5013 are not divisible by 15 because the unit's place is not either 0 or 5 which makes them not divisible by 5 and doesnot satisfies the divisibility rule of 15.

13. i) 39M2

Ans⇒ The difference of sum of even digits and odd digits is ~~11 or 0~~ multiple of 11 or 0.

Sum of odd digits = 9+2
= 11

Sum of even digits = 3+M

11 - (3+M) = 8 - M

If it is 0 or multiple 11.
8 - M = 0
M = 8
The ~~re~~ number is 3982.

ii) 3M422

Ans⇒ The difference of sum of even digits and odd digits is multiple of 11 or 0.

Sum of odd digits = 3+4+2
= 9

∴ Sum of odd digits = 2+M

9-(2+M) = 7-M

If it is 0 or multiple of 11
7-M=0
M=7
The number is 37422

iii) 70975 M

Ans⇒ The difference of sum of even digits and odd digits is multiple of 11 or 0.

Sum of odd digits = 7+0+M
= 7+M
Sum of even digits = 5+9+7
= 21

21-(7+M)=14-M

If it is multiple of 11 or 0.
14-M=11
M=3
The number is 709753.

iv) 14M75

Ans⇒ The difference of sum of odd digits and even digits is multiple of 11 or 0.

Sum of odd digits = 5+1+M
= 6+M

Sum of even digits = 7+4
= 11

11 - (6+M) = 5-M

If it is multiple of 11 or 0.
5-M=0
M=5
The number is 14575.