BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

Class VI SUBJECT:-MATHEMATICS

CHAPTER:-PLAYING WITH NUMBERS

PART-2

TOPIC:- TEST FOR DIVISIBILITY OF NUMBERS

GUIDELINES:

Dear Students

Kindly refer to the following notes/video links from the Chapter- "PLAYING WITH NUMBERS" SUB TOPIC- " TESTS FOR DIVISIBILITY OF NUMBERS-PART-2" and thereafter do the questions in your math notebook.

***ONLY NCERT QUESTIONS TO BE DONE IN NOTEBOOK**

LINK FOR THE CHAPTER:- http://ncert.nic.in/textbook/textbook.htm?femh1=3-14

INTRODUCTION:

Divisibility rules of whole numbers help us to quickly determine if a number can be divided by 2, 3, 4, 5, 9, and 10 without doing a long division.

NOTE: "Divisible by" and "can be exactly divided by" mean the same thing

SUB TOPICS

- **DIVISIBILITY BY 3**
- **DIVISIBILITY BY 9**
- **DIVISIBILITY BY 6**
- **DIVISIBILITY BY 11**

KEY POINTS

Divisibility by 3 (Refer to the link- https://www.youtube.com/watch?v=xk1W_WnheRc ; watch the video from 0:00 to 3:45 and 11:55 till the end)

If the sum of the digits of any number is divisible by 3 then that number is divisible by 3.

Example: 429 ;

4 + 2 + 9 = 15 ;
15 ÷ 3 = 5
Therefore, 429 is divisible by 3.

Divisibility by 9 (Refer to the link- https://www.youtube.com/watch?v=cSDSwS22j0M ; watch the video from0:00 to 2:21)

A number is divisible by 9 if the sum of its digits is divisible by 9.

Example: 42,471.
4 + 2 + 4 + 7 + 1 = 18 is divisible by 9.
Therefore, 42,471 is divisible by 9.

Divisibility by 6(Refer to the link- https://www.youtube.com/watch?v=O_LYsWaGJCg)

If a number is divisible by 2 and 3, then that number is divisible by 6.

Example: 246.
It is divisible by 2 as it ends with 6.
Now, 2 + 4 + 6 = 12.
12 is divisible by 3,
So 246 is divisible by 3 also.
This shows that 246 is divisible by 2 and 3.
Therefore, 246 is divisible by 6.

Divisibility by 11 (Refer to the link- https://www.youtube.com/watch?v=I_kAuCsbltg ; watch the video from 0:00 to 5:38)

The difference of the sum of the numbers in even positions and the sum of the numbers in the odd positions is either 0 or divisible by 11.

Example 1: 9724

Sum of digits at even place : 9 + 2 = 11
Sum of digits at odd place : 7 + 4 = 11.

Difference between the two sums is 0.
Therefore, 9724 is divisible by 11.

Question:

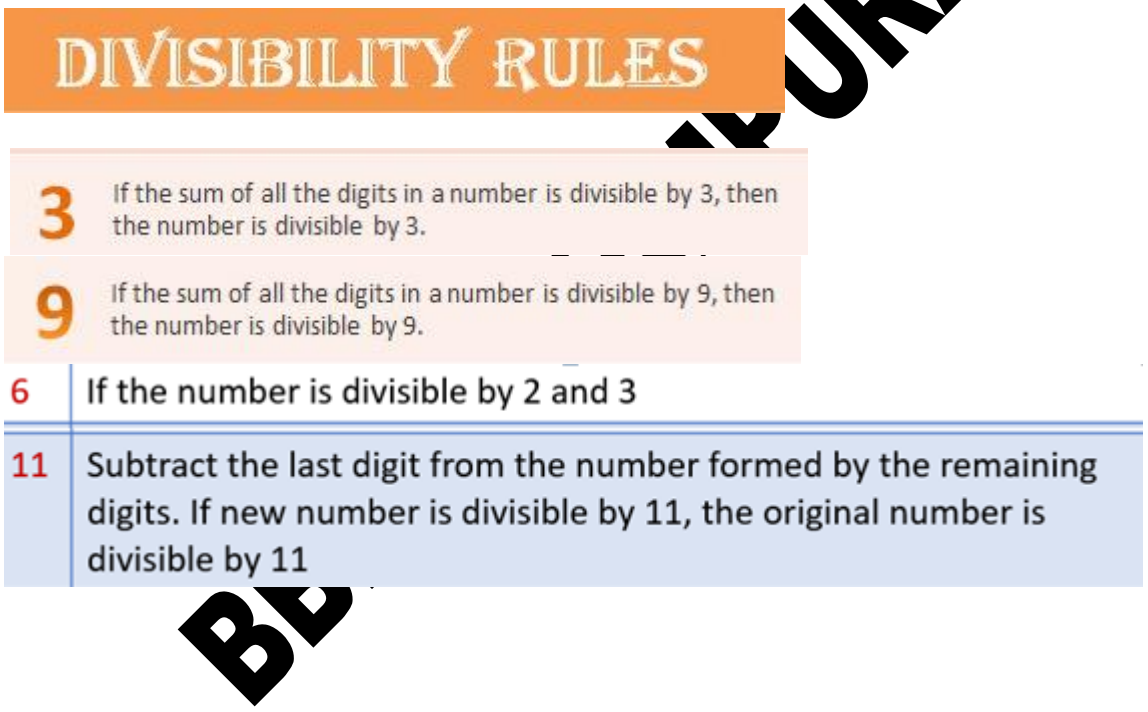
What is the missing digit which makes the number 347 exactly divisible by 11?

We know the divisibility rule for 11:
If the difference of the sum of its digits at odd places and sum of its digits at even places is either 0 or a number divisible by 11.

3476:
Sum of the odd places =3+7=10
Sum of the even places =4+6=10
Difference = Sum of the odd places − Sum of the even places
Difference =10−10=0
So, 3476 is divisible by 11.
Therefore, 6 is the missing digit.

Refer to the link for solved question-divisibility test for all the numbers:
https://www.examfear.com/free-video-lesson/Class-6/Maths/Playing-With-Numbers/part-23/Maths_Playing_With_Numbers_part_23_(Questions:_Divisibility_test)_CBSE_Class_6.htm

POINTS TO REMEMBER-



ASSIGNMENT

(From NCERT DO EX3.3;Q1- Divisibility test for 3,9,6,11 **AND Q3 (part f to j) , Q4 (part a to d), Q5, Q6 –- TO BE DONE IN MATHS NOTEBOOK)**

PRACTISE QUESTIONS
(To be done in practice notebook)

Q1. Is 9 a factor of the following?

(i) 394683

(ii) 1872546

(iii) 5172354

Q2.Fill in the smallest digit to make the number divisible by:

(i) by 5 : 7164__, 32197__

(ii) by 3 : 1__43, 47__05, __316.