

Simple Concept Tough Problem - 2

by Debashish Sharma - Sunday, April 26, 2020

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Hello readers! This is the second of a series of articles dealing with tough mathematical problems that require just basic mathematics for their solutions. A bit late, though. The [first article](#) was published on 25th October 2019. The problem for the second article is taken from the question paper of Pre-Regional Mathematics Olympiad (PRMO) 2018. I provide a solution using the concept of congruences and the basic counting principles. Here is the question (I have modified it a bit):

Consider six digit numbers of the form $abcba$. How many of these numbers are divisible by 7 ? If b is odd, then how many of these are divisible by 7?

Let us discuss the solution to this problem in the video below.

[YouTube Video](#)

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