

Prime Number distribution

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Abstract: This article studies how prime numbers are distributed and approaches a trial and error method for prediciting next prime number.

Keywords: Prime number, Odd number, addition, trial and error.

I. INTRODUCTION

The nature of this work is to find is a method to find prime number sequence. It aims to study the nature of prime numbers using a trial and error method.

II. PRIME NUMBER COMBINATION

TABLE I: PRIME NUMBER COMBINATION

1	2	3	5	7
	$2 + 1 = 3$	$3 + 2 = 5$	$5 + 2 = 7$	$7 + 4 = 11$
$11 + 2 = 13$		$13 + 4 = 17$	$15 + 4 = 19$	$17 + 6 = 23$
		$23 + 6 = 29$	$25 + 6 = 31$	
$31 + 6 = 37$		$33 + 8 = 41$	$35 + 8 = 43$	$37 + 10 = 47$
		$43 + 10 = 53$		$47 + 12 = 59$
$51 + 10 = 61$			$55 + 12 = 67$	$57 + 14 = 71$
$61 + 12 = 73$			$65 + 14 = 79$	$67 + 16 = 83$
		$73 + 16 = 89$		
$81 + 16 = 97$				

Table should be calculated from left to right in orderly manner. from 1 to 2, 2 to 3, 3 to 5, 5 to 7.

If the same method is applied, the next prime number can be predicted in the given table. Here prime number upto 100 is calculated and given.

TABLE II: GENERAL COMBINATION TABLE

1	2	3	5	7
	$2 + 1 = 3$	$3 + 2 = 5$	$5 + 2 = 7$	$7 + 4 = 11$
$11 + 2 = 13$		$13 + 4 = 17$	$15 + 4 = 19$	$17 + 6 = 23$
$21 + 4 = 25$		$23 + 6 = 29$	$25 + 6 = 31$	$27 + 8 = 35$
$31 + 6 = 37$		$33 + 8 = 41$	$35 + 8 = 43$	$37 + 10 = 47$
$41 + 8 = 49$		$43 + 10 = 53$	$45 + 10 = 55$	$47 + 12 = 59$
$51 + 10 = 61$		$53 + 12 = 65$	$55 + 12 = 67$	$57 + 14 = 71$
$61 + 12 = 73$		$63 + 14 = 77$	$65 + 14 = 79$	$67 + 16 = 83$
$71 + 14 = 85$		$73 + 16 = 89$	$75 + 16 = 91$	$77 + 18 = 95$
$81 + 16 = 97$		$83 + 18 = 101$		

TABLE I:

Prime number + even number = Prime number

$$3 + 2 = 5$$

$$5 + 2 = 7$$

$$7 + 4 = 11$$

$$11 + 2 = 13$$

It is clear from the table, odd numbers of column 3 in the table are 3, 13, 23, 33 increase in the order of 10 and even numbers which is added with odd numbers 2, 4, 6 increase in the order of 2

That applies to all column such as $7 = 7, 17, 27 \dots 5 = 5, 15, 25 \dots$

TABLE II:

But the point to be kept, is in some table, it is given blank in TABLE I

What to be understood is, if such combination gets added like $53 + 12 = 65$, $63 + 14 = 77$ gives numbers other than prime numbers.

Though the numbers 53 and 63 doesn't yield prime numbers, the ratio 3, 13, 23, 33, 43, 53, 63 is continued. Similarly the even number added with is also continued as 2, 4, 6, 8, 10, 12, 14 etc

in TABLE II all combination are given.

in TABLE I prime combination given.

III. CONCLUSION

The drawback of this paper is it's a trial and error method. Eventhough we can predict next prime number, but the method is long. Apart, this paper gives a idea on distribution of prime numbers.
