

01

In the following sequence, there are one '1', two '2's, three '3's, four '4's and so on. What is the 888th number in the sequence ?

1, 2, 2, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 6

Your solution here:

02

In a hall, seats were arranged equally in rows. Swarup seat on one of the seats. There were 7 seats to his right and 12 seats to his left. There were 6 rows of seats in front of him and 14 rows behind him. How many seats were there in the hall ?

Your solution here:

03

By reversing the digits of a 2-digit number ab , one obtains another 2-digit number ba , where a and b are distinct. If their sum $ab + ba$ is divisible by 11, find the 2-digit number ab if it is to be, (a) the smallest (b) the largest.

Your solution here:

04

What is the ones digit of $25^{55} + 17^{77}$?

Your solution here:

05

The number 119 is very amazing.

When divided by 2, it leaves a remainder of 1.

When divided by 3, it leaves a remainder of 2.

When divided by 4, it leaves a remainder of 3.

When divided by 5, it leaves a remainder of 4.

When divided by 6, it leaves a remainder of 5.

Find another 3-digit number closest to 119 which has this property.

Your solution here:

06

Find the value of

$$\left(1 + \frac{1}{6} + \frac{1}{7} + \frac{1}{8}\right) \left(\frac{1}{6} + \frac{1}{7} + \frac{1}{8} + \frac{1}{9}\right) - \left(1 + \frac{1}{6} + \frac{1}{7} + \frac{1}{8} + \frac{1}{9}\right) \left(\frac{1}{6} + \frac{1}{7} + \frac{1}{8}\right)$$

Your solution here: