

# RAM Maths Circle

Date: December 20, 2025  
Swami Vivekanand School, Dombivli

In this session, the mentors discussed following problems with the students.

1. What is  $\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \frac{1}{4 \times 5} = ?$
2. On holiday Pratik always wears pants, shorts, T-shirt and sunglasses. Pratik has to put on the T-shirt before sunglasses and the pants before shorts. Each day he dress in a different order. For how long can he keep this up?
3. What is  $\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \frac{1}{4 \times 5} \dots \frac{1}{100 \times 101} = ?$
4. How many four digit numbers can be formed using the digits  $1, 2, 3, \dots, 9$  such that
  - (a) No digit is repeated
  - (b) Number formed is an odd number.
  - (c) sum of digits of number formed is 28.