

RAM maths circle - nashik

BHAS BHAMRE ACADEMY

Session - 5

Date - 5 September 2026
Faculty - Bhas Bhamre

Introduction:

This problem sheet contains a collection of puzzles, warm-up questions, and challenging mathematical problems. The purpose of these questions is to develop logical reasoning, creativity, and problem-solving skills.

- **Do not worry about finishing every question.** Focus on understanding and exploring ideas rather than completing everything.
 - **You are encouraged to explore.** Try different approaches, make conjectures, and investigate patterns that you discover.
 - **Talk to each other.** Discuss your ideas with your friends and learn from different ways of thinking.
 - **Treat each other with respect.** Listen carefully to others and value every contribution.
 - **Have fun.** Mathematics is about curiosity, discovery, and enjoyment.
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Warm-up

- 1) There are 6 oranges in a basket and you have taken two from it. How many will remain with you?
- 2) There are 6 oranges in a basket. If I take 3 and give one to my friend from it, how many will be there in the basket?
- 3) There are 6 oranges in a basket. If I take 3 and give one to my friend from them, how many will be there in the basket?
- 4) Two days ago, I was 8 and next year I will be 11. How is it possible?

Going ahead!

- 5) Four people need to cross a rickety footbridge; they all begin on the same side. It is dark, and they have one flashlight. A maximum of two people can cross the bridge at one time. Any party that crosses, either one or two people, must have the flashlight with them. The flashlight must be walked back and forth; it cannot be thrown.

Person 1 takes 1 minute to cross the bridge, person 2 takes 2 minutes, person 3 takes 5 minutes, and person 4 takes 10 minutes. A pair must walk together at the rate of the slower person's pace.

Can they cross the bridge in 17 minutes?

Hint question:

- (1) What can be the different possibilities to start with?

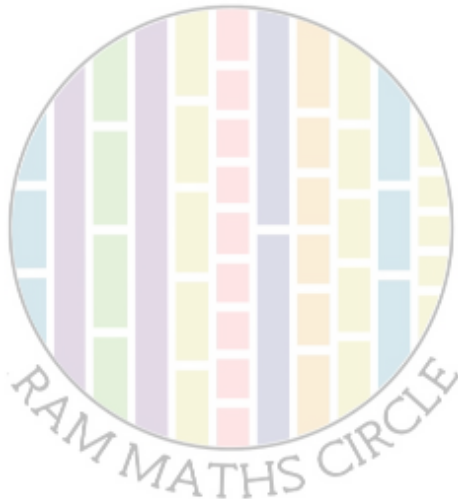
6) A little girl counts from 1 to 1000 using the fingers of her left hand as follows.

She starts by calling her thumb 1, the first finger 2, middle finger 3, ring finger 4, and little finger 5. Then she reverses direction, calling the ring finger 6, middle finger 7, first finger 8, and thumb 9, after which she calls her first finger 10, and so on.

If she continues to count in this manner, on which finger will she stop?

Next questions:

- (1) What if counting from 1 to 2026?
- (2) What if counting from 1 to 5003?
- (3) Can you see any generalized pattern here?



—X—X—X—X—