



G3.70 | SHORTEST DISTANCE IN METRE & CENTIMETRES

Geometry & Measurement Concepts - NCERT Chapter 4: Long and Short

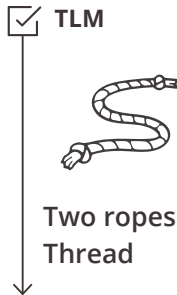
Students will be able to understand the concept of the shortest distance between two points

40- 50 min

PRE REQUISITES:

G3.69 Know how to measure lengths in cms & metres

TLM



Two ropes of metres
Thread

MISCONCEPTIONS

None

KEY VOCABULARY

None

PLAY



Various paths between two points

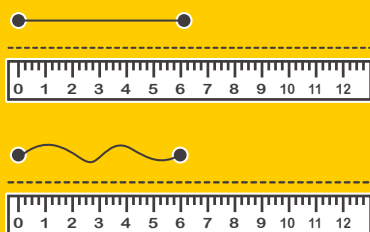
- Call 2 students. Ask them to stand at different corners of the classroom
- Ask them to hold a rope straight between them & mark the rope at the place where each is holding it
- Call 2 more students. Ask them to stand at two corners of the classroom. Ask one student to hold one end of the rope
- Place a table & a chair between them. Loop the rope around the table & the chair

- Ask the other student to hold the rope straight & mark the rope where they are holding it
- Ask the two groups of students to compare their markings on the rope & tell which is longer

QUESTION

Why do you think one rope showed less distance & the other showed more?

PROCESS

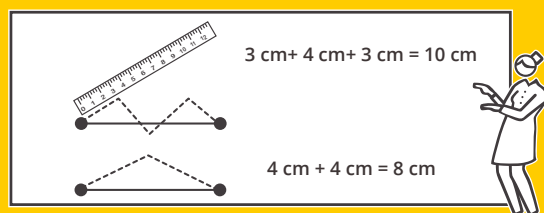


Finding shortest path

- Draw two points & join them with a straight & curved line
- Place a piece of thread along the straight line & mark the distance between them on the thread
- Measure the thread using a cm ruler. Tell the measurement represents the length of the straight line between 2 points
- Repeat for measuring curved line's length

- Write both measurements on the blackboard & tell that the straight line is shorter than curved line
- Draw 2 points on the board mark as "school" & "home". Draw a third point at a distance from the two points & mark as park
- Explain that a child who walks directly from school back to home walks lesser than a student who go home via park
- Tell the students that how among many paths joining two points the straight path connecting them is always the shortest

PRACTICE



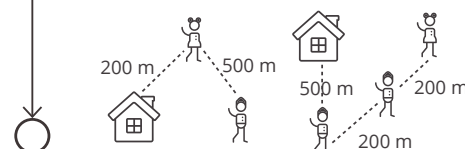
Draw the question on the black board & ask the students to solve

- Help the students solve question 3 from the worksheet. Ask the students to look at the picture & identify the shortest path connecting the two points

QUESTION

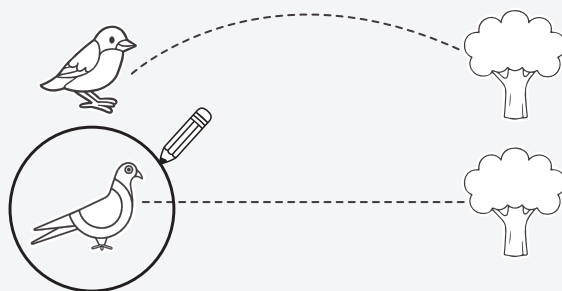
Draw another path between the two points which is longer than the paths shown in the picture

- Help the students solve question 4 from the worksheet. Ask the students to calculate the total distance a child needs to walk in both cases & tell which path is longer



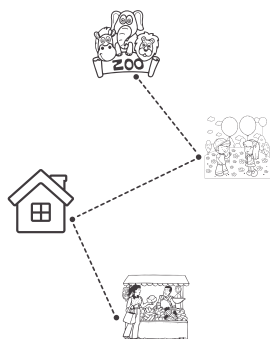


- ① SOLVED EXAMPLE : Circle the bird who has to cover lesser distance



- ② Ripun started from the market, went to her home & then to the park, & lastly to the zoo.

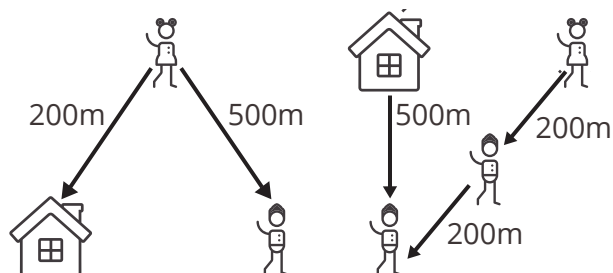
Is there a shorter way to reach the zoo from the market? Draw & show?



- ③ Use a cm ruler to measure lengths of all paths between A & B:



- ④ Calculate the total distance a child needs to walk in both cases & tell which path is longer



- ⑤ Draw 2 trees & show any 2 paths connecting them. Show the shorter path in red colour



This is the map of the roads in a city. A is a cinema hall & B is a bus stand. C is a market.

- Which is the shortest way to reach the cinema hall from the bus station? (remember you can only walk on the road shown here)
- Which is the nearer from the cinema hall? The market or the bus station.

