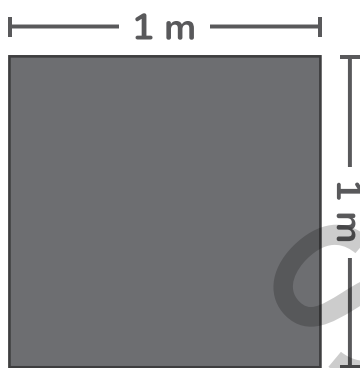


Activity Sheet

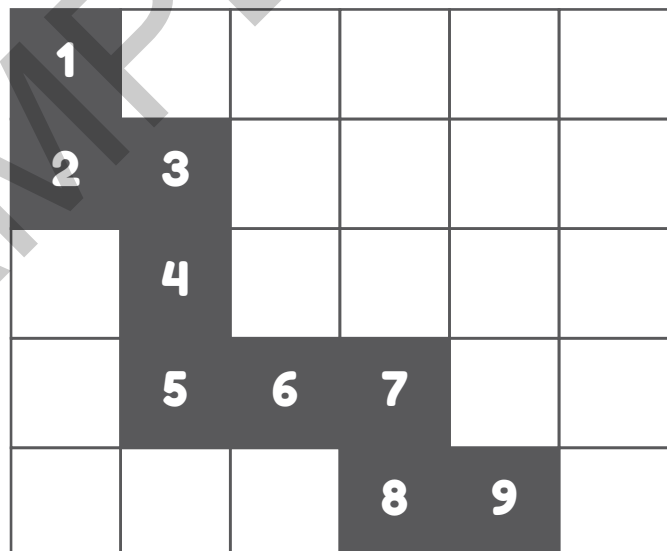
Road Runners: Build and Explore

Concept Explanation

If one square is 1 square unit, then the area of the highlighted cells in this grid is 9 square units.



1 square meter = 1m x 1m



Things to Use



Wizbot



6x5 Grid Arena



Coding Cards



Pencil and
Notebook

Exercise

Let's make some new roads to help people move from one place to another using the shortest path!

You have to find a way between the start and the Flag cell. To begin, place the cards as shown on the arena. Look at the layout and find the best route for the road. Remember, it should be the shortest possible path. Once you've found the path, code Wizbot to follow it and reach the Flag cell.

But here's a challenge! Will you make roads in the areas marked as market, sand, bricks, or crops? No! You must avoid these areas while creating your road, so be careful as you plan your path.

Once the road is completed, calculate the area of the cells that have been turned into roads.

Also, calculate the total cost of constructing the road. For each cell used to make the road, the cost is Rs 5000.

Finally, calculate the area of the cells that were not turned into roads. How much land did you save by finding the shortest path?

Let's see how quickly you can build the road and calculate the cost!

A.



B.



C.



D.

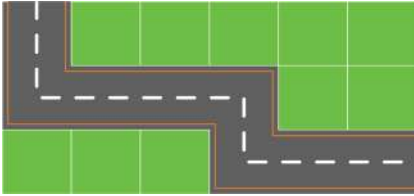


Teacher's Handbook

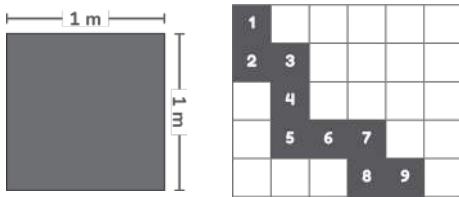
Learning Objectives

1. Students will be able to find area of a given path.
2. Students will be able to develop problem-solving skills by estimating the optimal routes.

Introductory Image



Concept Explanation



1 Square meter = 1 m x 1 m

If one square is 1 square unit, then the area of the highlighted cells in this grid is 9 square units.

Things to Use



Wizbot



6x5 Grid Arena



Coding Cards



Notebook and Pencil
(Not Included)

Instructions

Step 1: Prepare

Step 2: Demonstrate

Step 3: Engage



Ask students to assign the following roles to the members of their group.

- **Card placer** – This student will place the cards on the arena.
- **Path Finder** – This student will find the path for the road.
- **Coder** - This student will code the Wizbot to take it to the flag cell.
- **Coding card arranger** – This student will arrange the coding cards.

- **Cost Calculator** - This student will calculate the cost of the road.

Exercise

(Duration: 25 mins)

Instructions:

Let's make some new roads to help people move from one place to another using the shortest path!

You have to find a way between the start and the flag cell. To begin, place the cards as shown on the arena. Look at the layout and find the best route for the road. Remember, it should be the shortest possible path. Once you've found the path, code Wizbot to follow it and reach the flag cell.


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