

Reasoning and Problem Solving

Step 1: Describing Movement

National Curriculum Objectives:

Mathematics Year 2: (2P2) [Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns \(clockwise and anticlockwise\)](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Two shapes are given on a grid. Explain if a sentence describing their location to each other is correct.

Expected Two objects facing a direction are on a grid. Explain if a sentence describing a one-step route between them is correct.

Greater Depth Two objects facing a direction are on a grid. Explain if a sentence describing a two-step route between them is correct.

Questions 2, 5 and 8 (Problem Solving)

Developing Write a statement describing how one shape must move on a grid.

Expected Write statements describing how two creatures must move to get to an object on a grid (one-step movements).

Greater Depth Write statements describing how two creatures must move to get to an object on a grid (two-step movements).

Questions 3, 6 and 9 (Problem Solving)

Developing Use one-step directions to locate a hidden shape on a grid.

Expected Use one-step directions to locate hidden treasure on a grid.

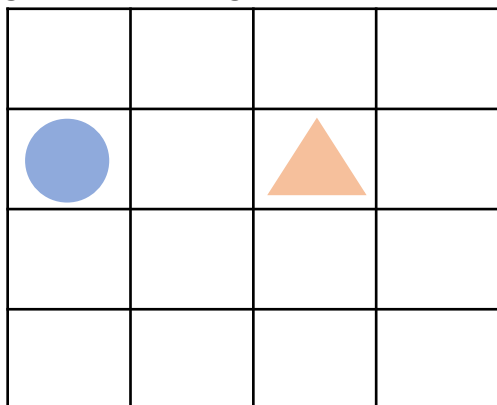
Greater Depth Use two-step directions to locate hidden treasure on a grid.

More [Year 2 Position and Direction](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Describing Movement

1a. Jose thinks the circle is two squares to the right of the triangle.



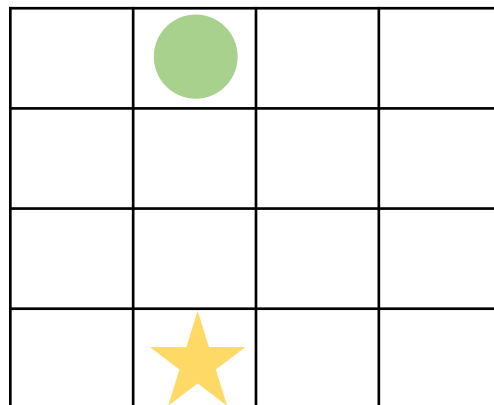
Is he correct? Explain how you know.



R

Describing Movement

1b. Rhea thinks the star is three squares up from the circle.

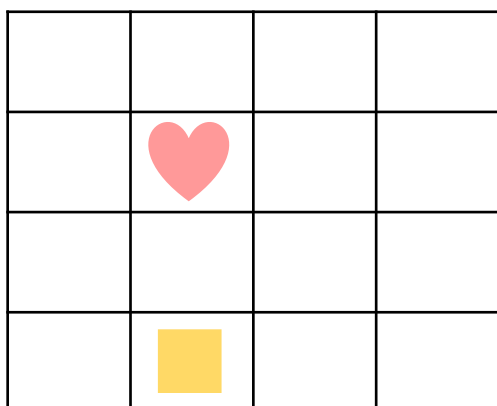


Is she correct? Explain how you know.



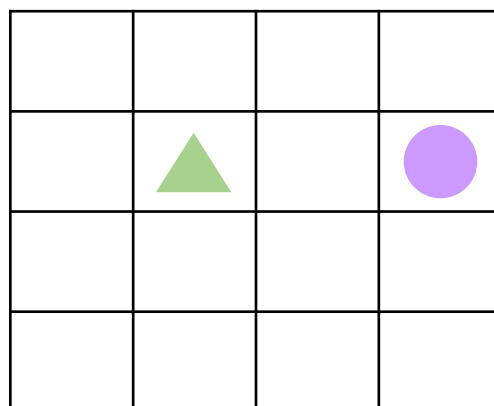
R

2a. Write a statement using up, down, left or right to describe how the heart can get to the square.



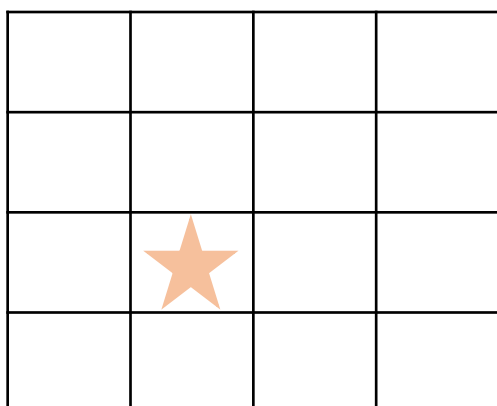
PS

2b. Write a statement using up, down, left or right to describe how the circle can get to the triangle.



PS

3a. The treasure is buried 2 squares right of the star.

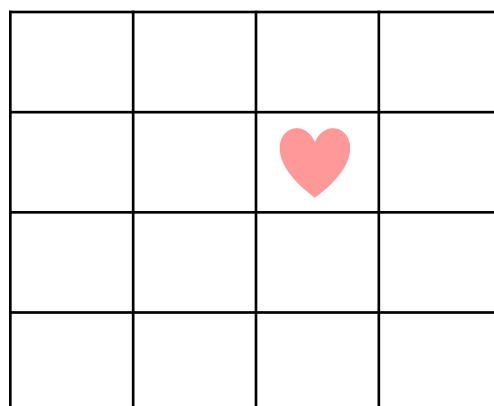


Where is the treasure buried?



PS

3b. The treasure is buried 2 squares left of the heart.



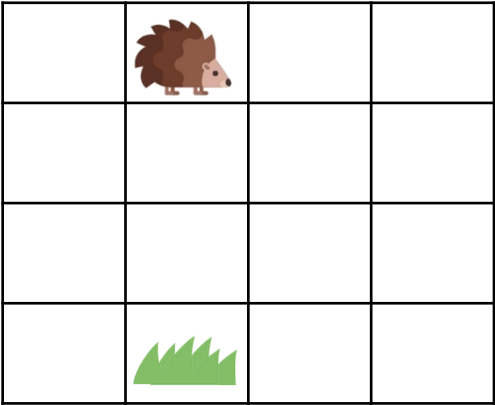
Where is the treasure buried?



PS

Describing Movement

4a. Cai thinks that if the hedgehog moves 3 squares down, it will find the grass.



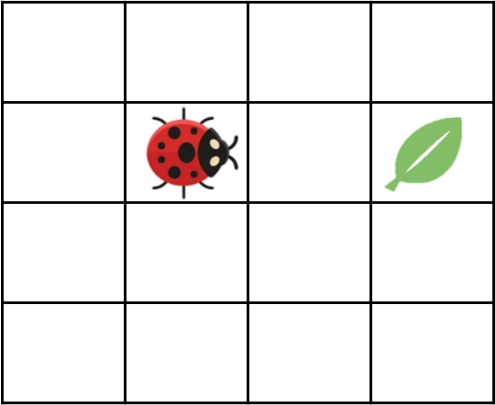
Is he correct? Explain how you know.



R

Describing Movement

4b. Genie thinks that if the ladybird moves 2 squares right, it will find the leaf.

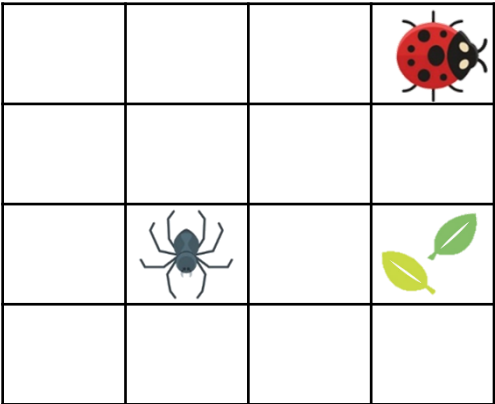


Is she correct? Explain how you know.



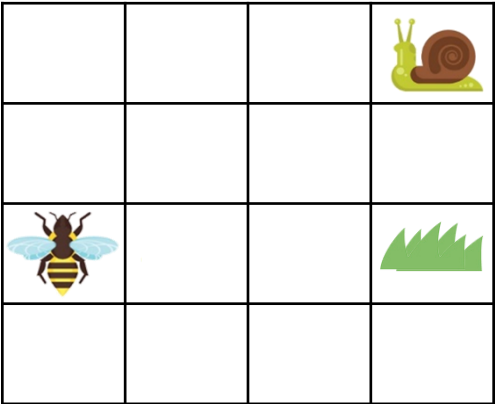
R

5a. Write statements using forwards, backwards, left and right to describe how each creature can get to the leaves.



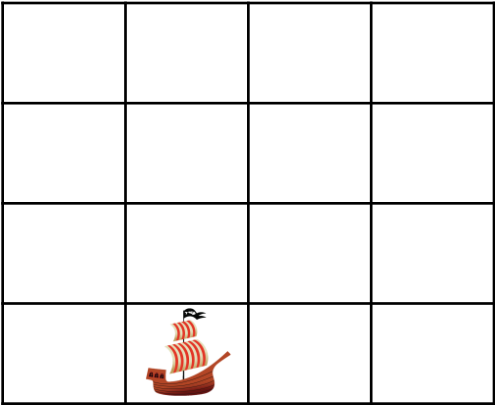
PS

5b. Write statements using forwards, backwards, left and right to describe how each creature can get to the grass.



PS

6a. The treasure is buried 2 squares left of the ship.

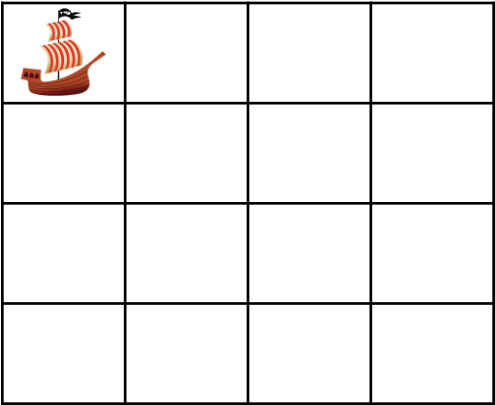


Where is the treasure buried?



PS

6b. The treasure is buried 3 squares right of the ship.



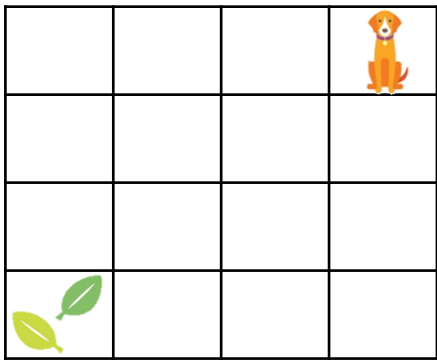
Where is the treasure buried?



PS

Describing Movement

7a. Joy thinks if the dog moves 2 squares down and 3 squares left, it will find the leaves.



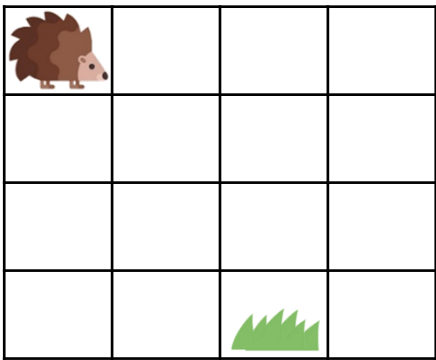
Is she correct? Explain how you know.



R

Describing Movement

7b. Paulo thinks that if the hedgehog moves 2 squares right and 3 squares down, it will find the grass.

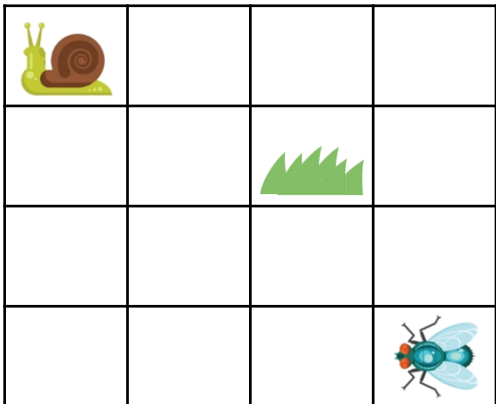


Is he correct? Explain how you know.



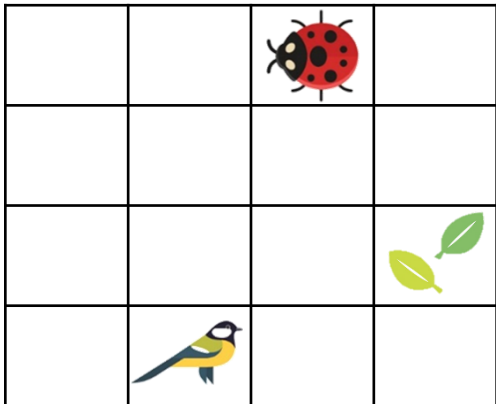
R

8a. Write statements using forwards, backwards, left and right to describe how each creature can get to the grass.



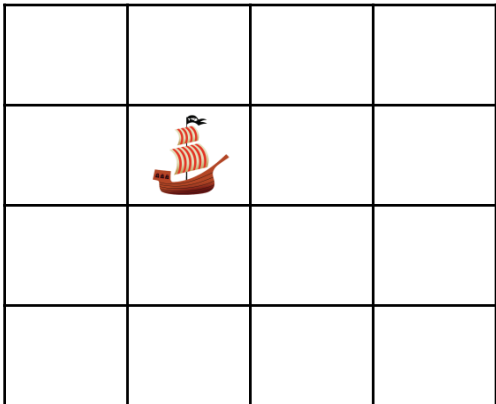
PS

8b. Write statements using forwards, backwards, left and right to describe how each creature can get to the leaves.



PS

9a. The treasure is buried 1 square forward and 2 squares right of the ship.

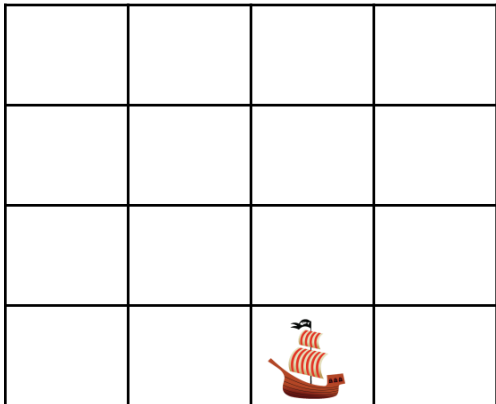


Where is the treasure buried?



PS

9b. The treasure is buried 3 squares right and 2 squares forward from the ship.



Where is the treasure buried?



PS

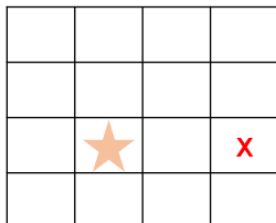
Reasoning and Problem Solving Describing Movement

Developing

1a. Jose is incorrect. The circle is two squares to the left of the triangle.

2a. Various possible answers, for example: 2 squares down.

3a.

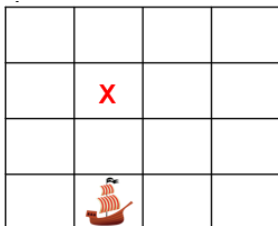


Expected

4a. Cai is incorrect. The hedgehog should move three squares right to find the grass.

5a. Various possible answers, for example: The ladybird moves two squares right and the spider moves two squares left.

6a.

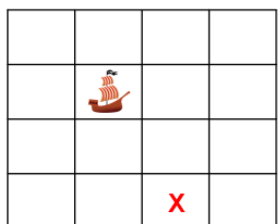


Greater Depth

7a. Joy is incorrect. The dog should move three squares forwards and 3 squares right to find the leaves.

8a. Various possible answers, for example: The snail moves two squares backwards and one square left, the fly moves two squares right and one square forward.

9a.



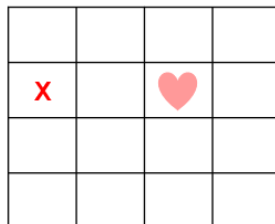
Reasoning and Problem Solving Describing Movement

Developing

1b. Rhea is incorrect. The star is three squares down from the circle.

2b. Various possible answers, for example: 2 squares left.

3b.

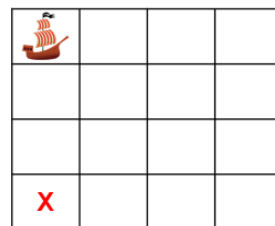


Expected

4b. Genie is incorrect. The ladybird should move two squares forwards to find the leaf.

5b. Various possible answers, for example: The snail moves two squares left and the wasp moves three squares right.

6b.



Greater Depth

7b. Paulo is incorrect. The hedgehog should move 2 squares forwards and 3 squares right to find the grass.

8b. Various possible answers, for example: The ladybird moves one square backward and two squares left, the bird moves two squares forwards and one square left.

9b.

