

Position and Direction

Master The Curriculum



2

Fluency & Reasoning Teaching Slides

Describing Movement

2



Fluency & Reasoning Teaching Slides

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Activity 1

Describing Movement

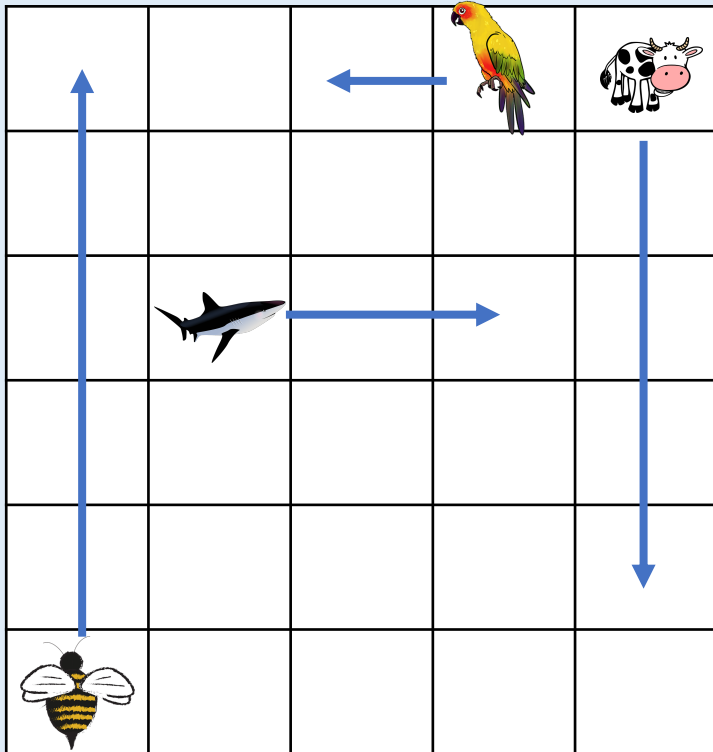
Using the words 'forwards', 'backwards', 'left' and 'right', give your partner some instructions to follow when moving around the classroom/playground.




Activity 2

Describing Movement

Complete the stem sentences to describe the movements made.



The  has moved 1 square _____.

The  has moved _____ squares _____.

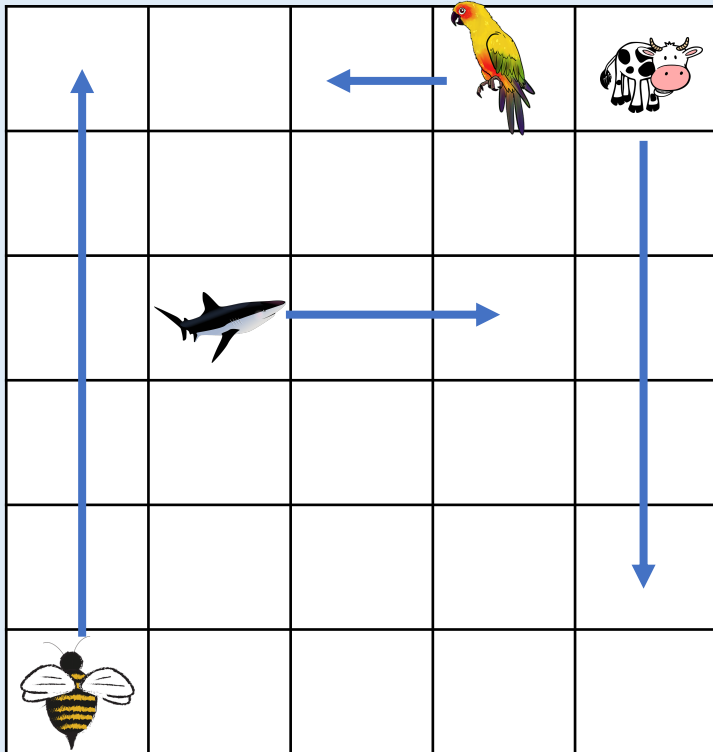
The _____ has moved 2 squares right.


The _____ has moved _____ squares up.

Activity 2


Describing Movement


Complete the stem sentences to describe the movements made.



The  has moved 1 square forward.

The  has moved 4 squares down.

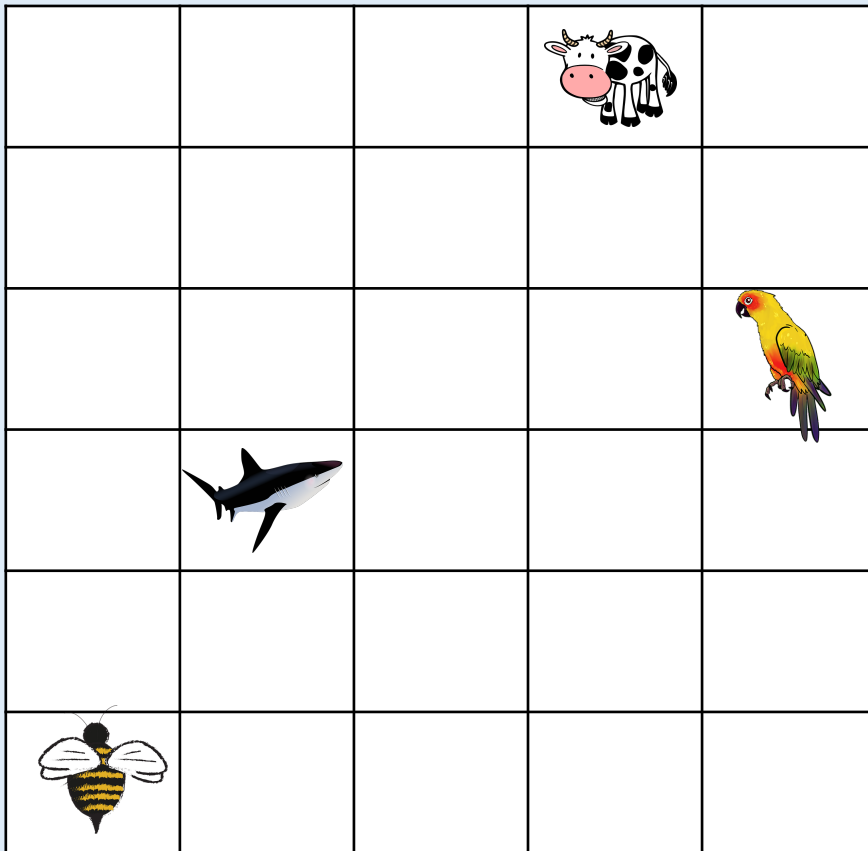
The  has moved 2 squares right.


The  has moved 5 squares up.


Activity 3

Describing Movement


Record these movements on the grid using arrows.



The  moves 1 square forward.

The  moves 3 squares down.

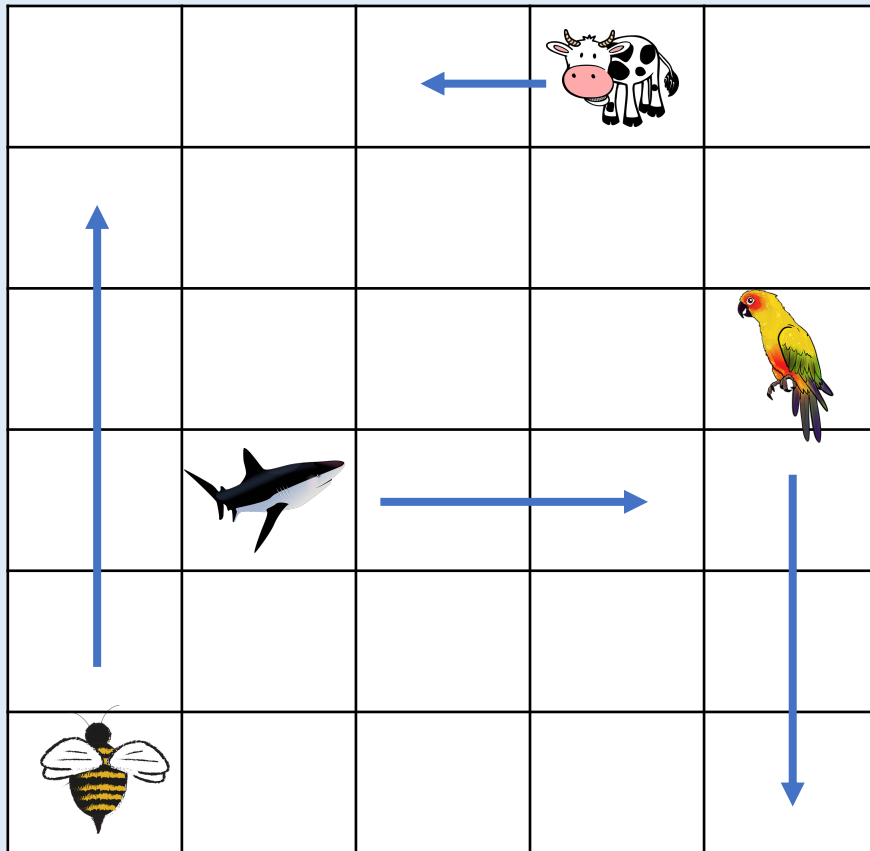
The  moves 2 squares right.

The  moves 4 squares up.


Activity 3

Describing Movement

Record these movements on the grid using arrows.



The  moves 1 square forward.

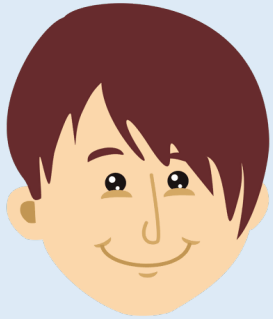
The  moves 3 squares down.

The  moves 2 squares right.

The  moves 4 squares up.

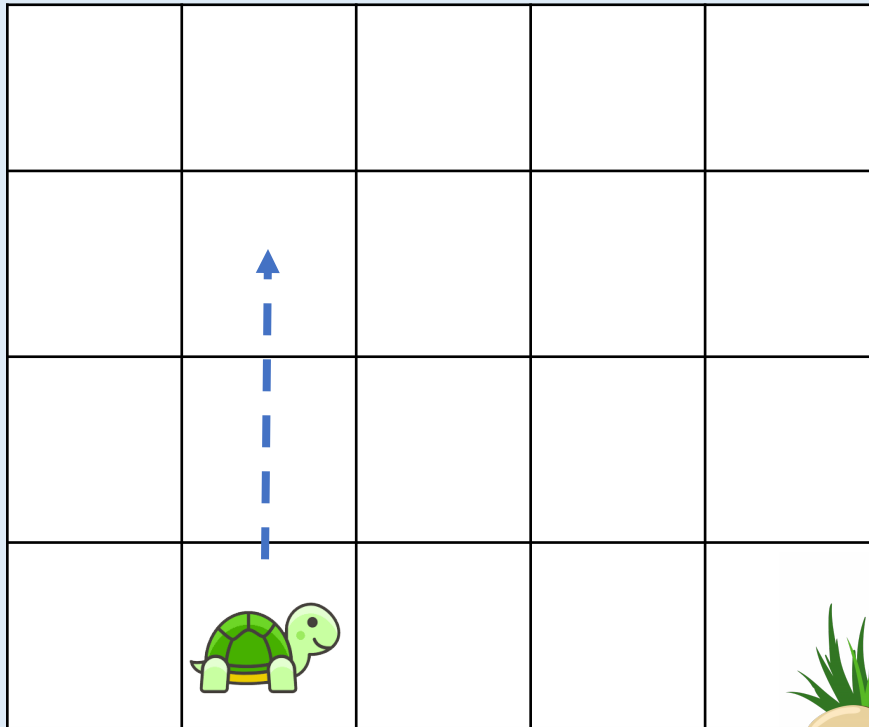
Reasoning 1

Describing Movement

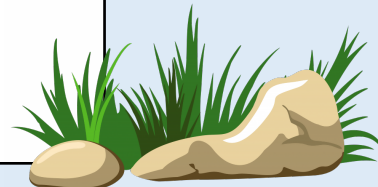


Amir

The turtle has moved 2 squares forward.

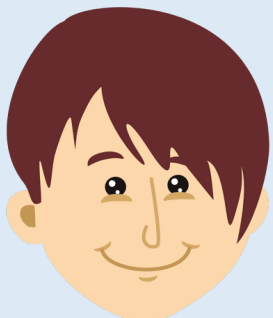


Is Amir correct?
Explain your reasoning.



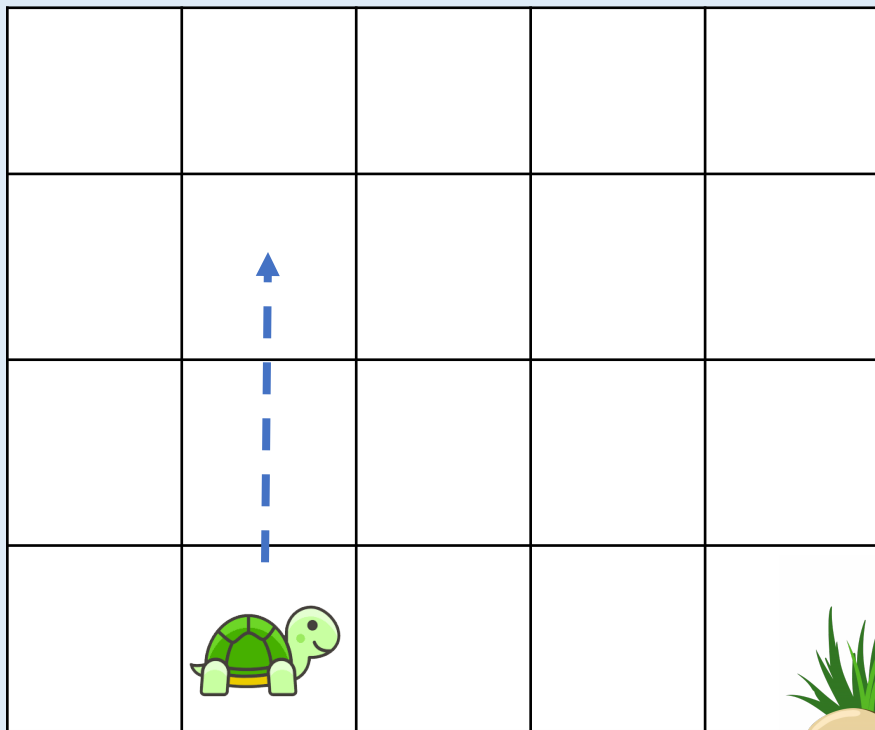
Reasoning 1

Describing Movement



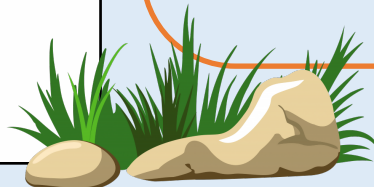
Amir

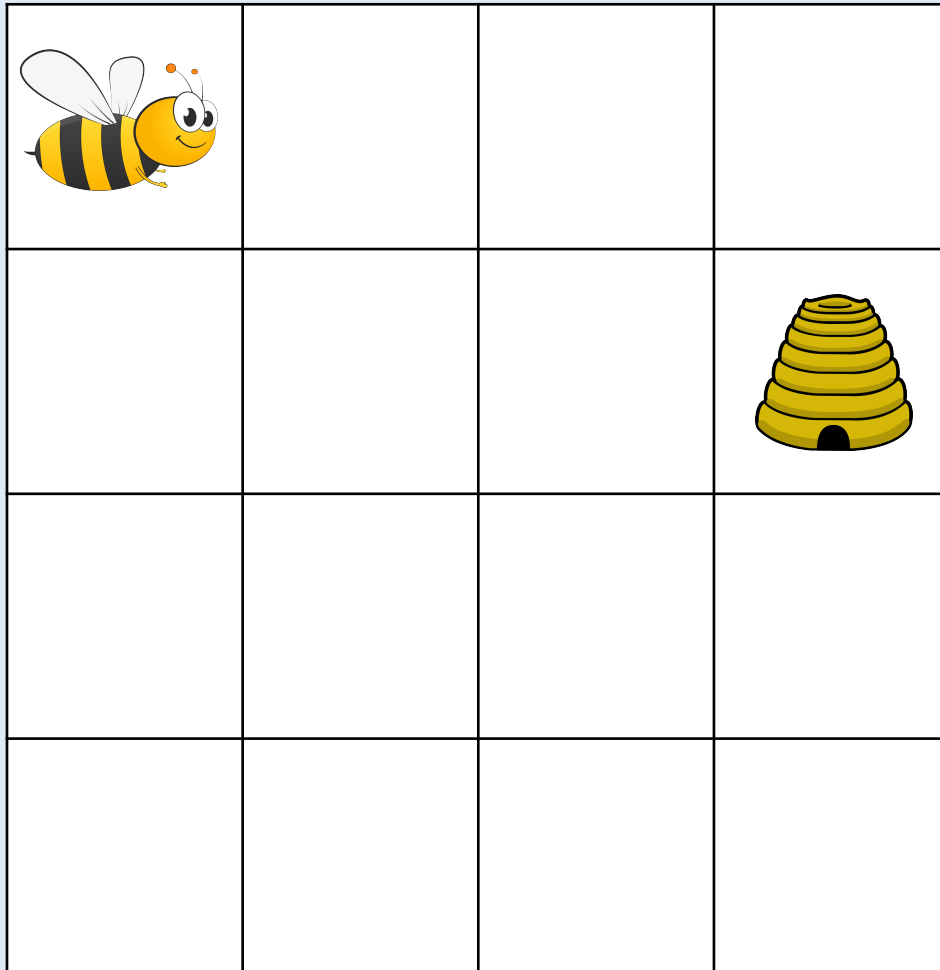
The turtle has moved 2 squares forward.



Is Amir correct?
Explain your reasoning.

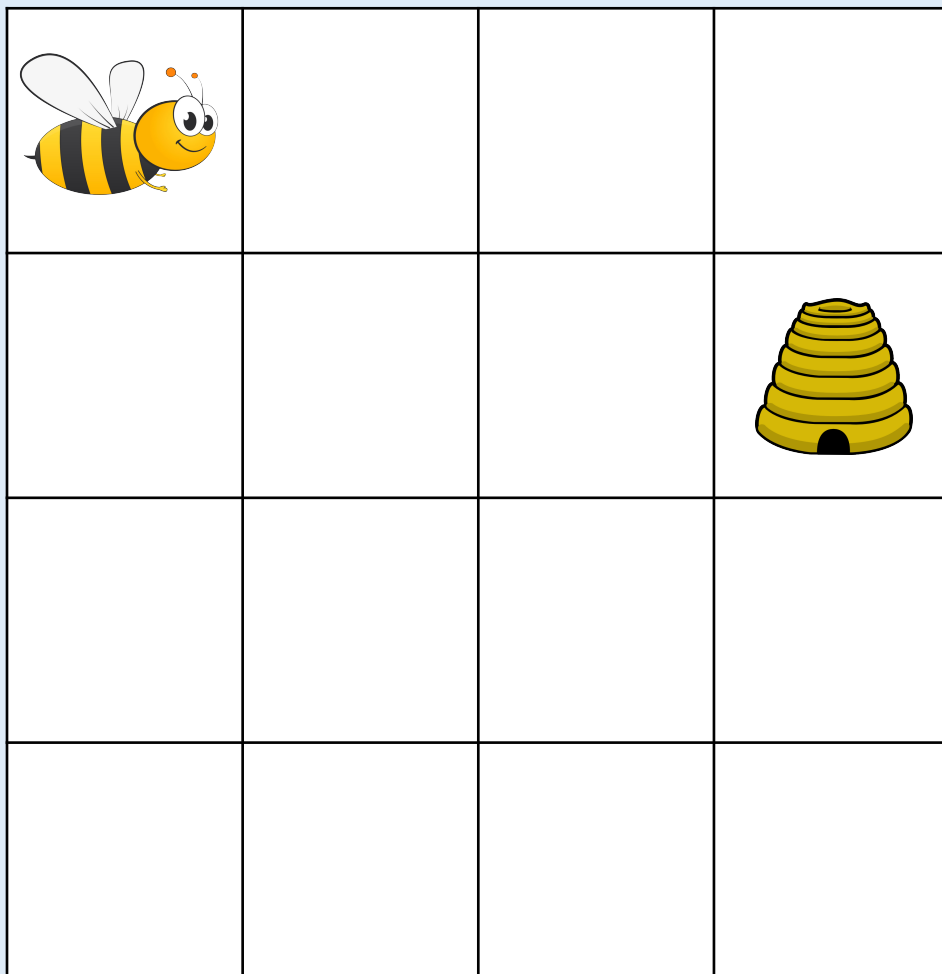
Amir is incorrect.
The turtle has moved 2 squares to the left because of the way it was facing to begin with.





How many different routes can you plot for the bee to get to the hive?

Use the words forwards, backwards, left and right.



How many different routes can you plot for the bee to get to the hive?

Use the words forwards, backwards, left and right.

Forward 3, Right 1.
Right 1, Forward 3.
Right 2, Forward 3,
Left 1.
Right 2, Forward 2,
Left 1, Forward 1.
There are more routes
for the children to find.

How far have you/has your partner moved?
In what direction have you/has your partner moved?

Which direction are we facing at the start?
Why is this important?

Can you describe the movements made by ____?

How could we record these movements?



Describing Turns

2



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Activity 1

Describing Turns

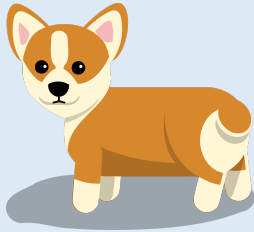
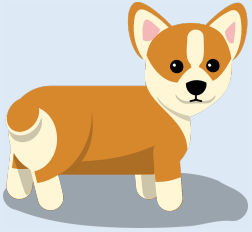
Ask your partner to describe the turn using the terms 'full turn', 'half turn', 'quarter turn', 'three-quarter turn', 'clockwise' and 'anticlockwise.'



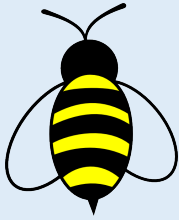
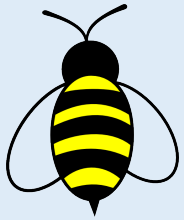
Activity 2

Describing Turns

Match the turn to the description.



A full turn.



A quarter turn
clockwise

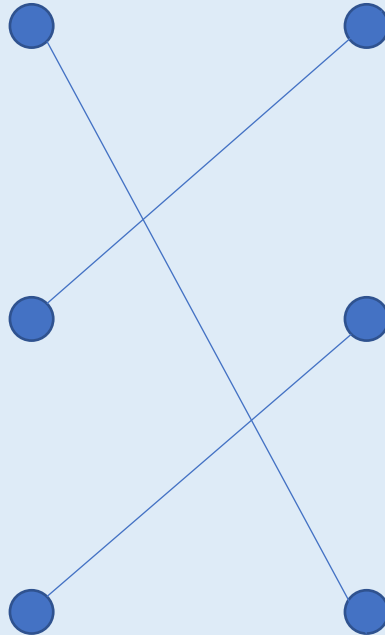
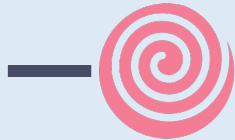
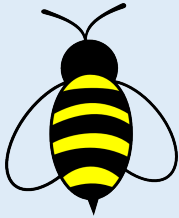
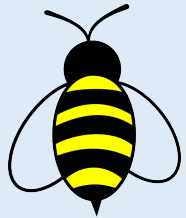
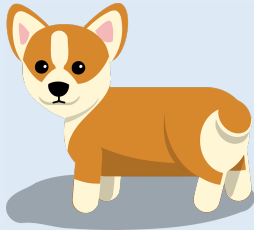
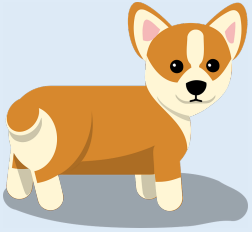


A half turn
anticlockwise

Activity 2

Describing Turns

Match the turn to the description



A full turn.

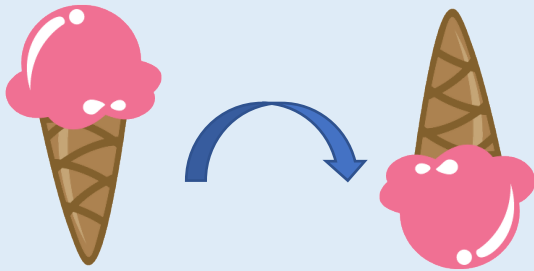
A quarter turn clockwise

A half turn anticlockwise

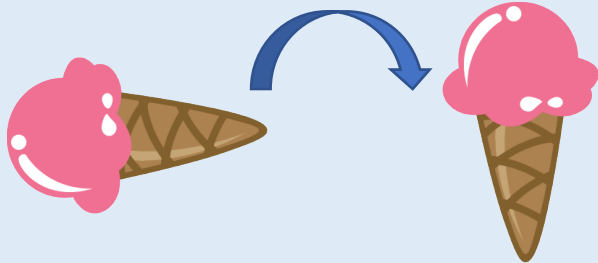
Activity 3

Describing Turns

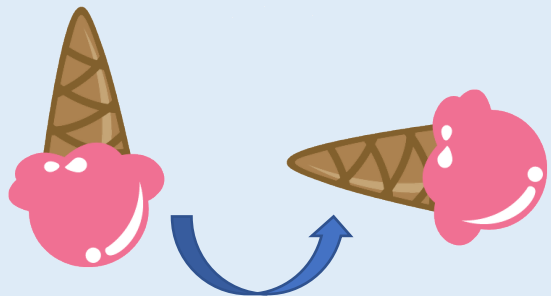
Describe how the object has turned each time.



The ice cream has made a _____ turn _____.



The ice cream has made a _____ turn _____.

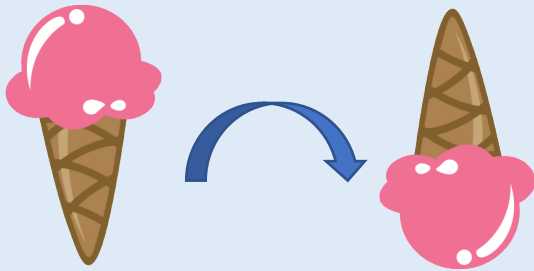


The ice cream has made a _____ turn _____.

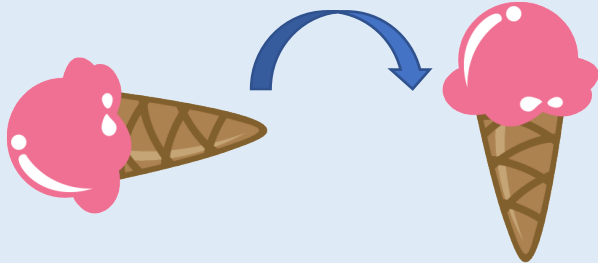
Activity 3

Describing Turns

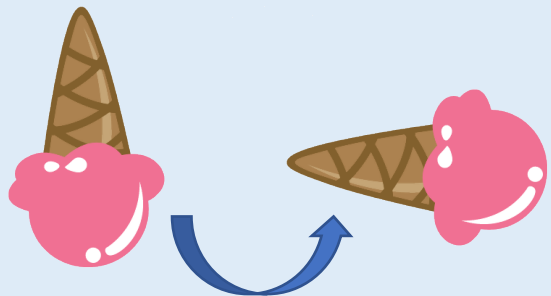
Describe how the object has turned each time.



The ice cream has made a half turn clockwise.



The ice cream has made a quarter turn clockwise.

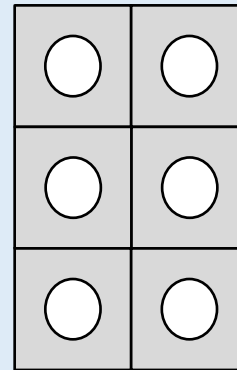
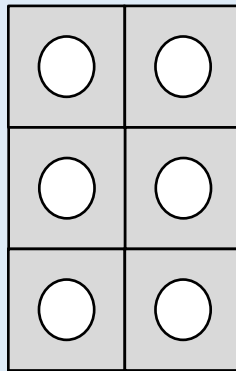


The ice cream has made a quarter turn anticlockwise.

Look at the number shape below.

How could the number shape have turned?

Describe all possibilities.



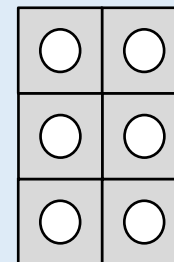
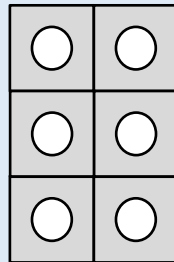
Reasoning 1

Describing Turns

Look at the number shape below.

How could the number shape have turned?

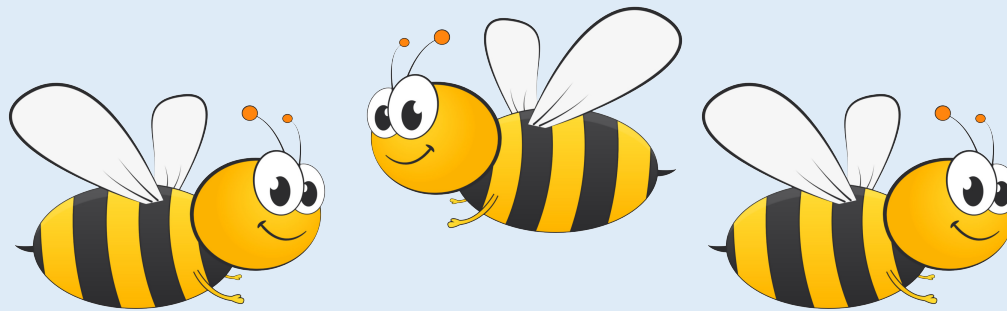
Describe all possibilities.



Half or full turn clockwise.
Half or full turn anticlockwise.

Always, Sometimes, Never

If two objects turn in different directions, will they not be facing the same way?



Always, Sometimes, Never

If two objects turn in different directions, will they not be facing the same way?



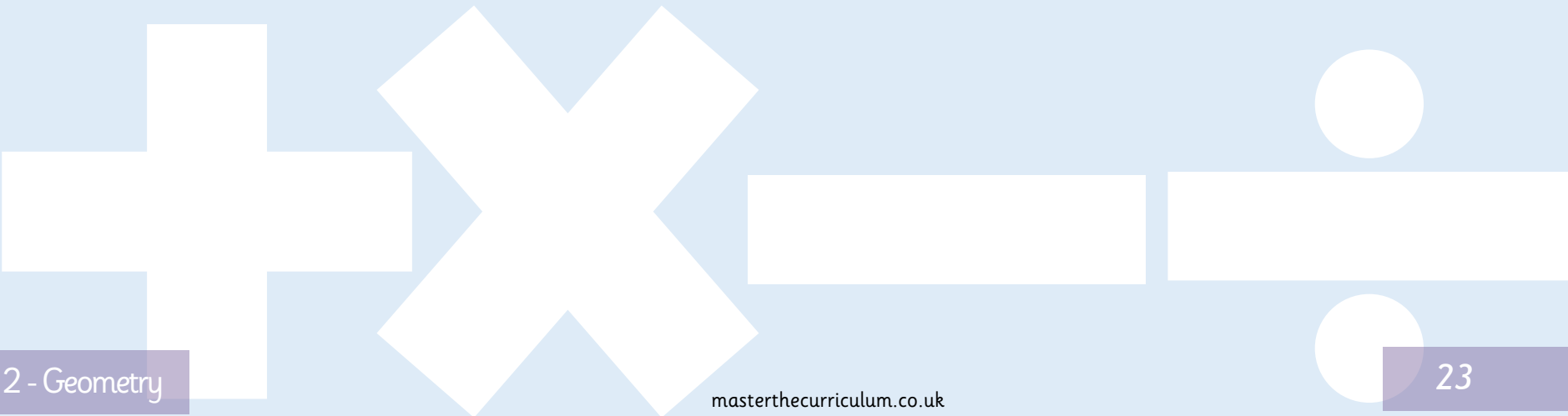
Sometimes.

It depends on how far the objects are turned – quarter, half, three quarters or full.

What direction was the turn?

Describe the turn that the number shapes have made.

Could there be more than one answer? Why?



Describing Movement and Turns

2



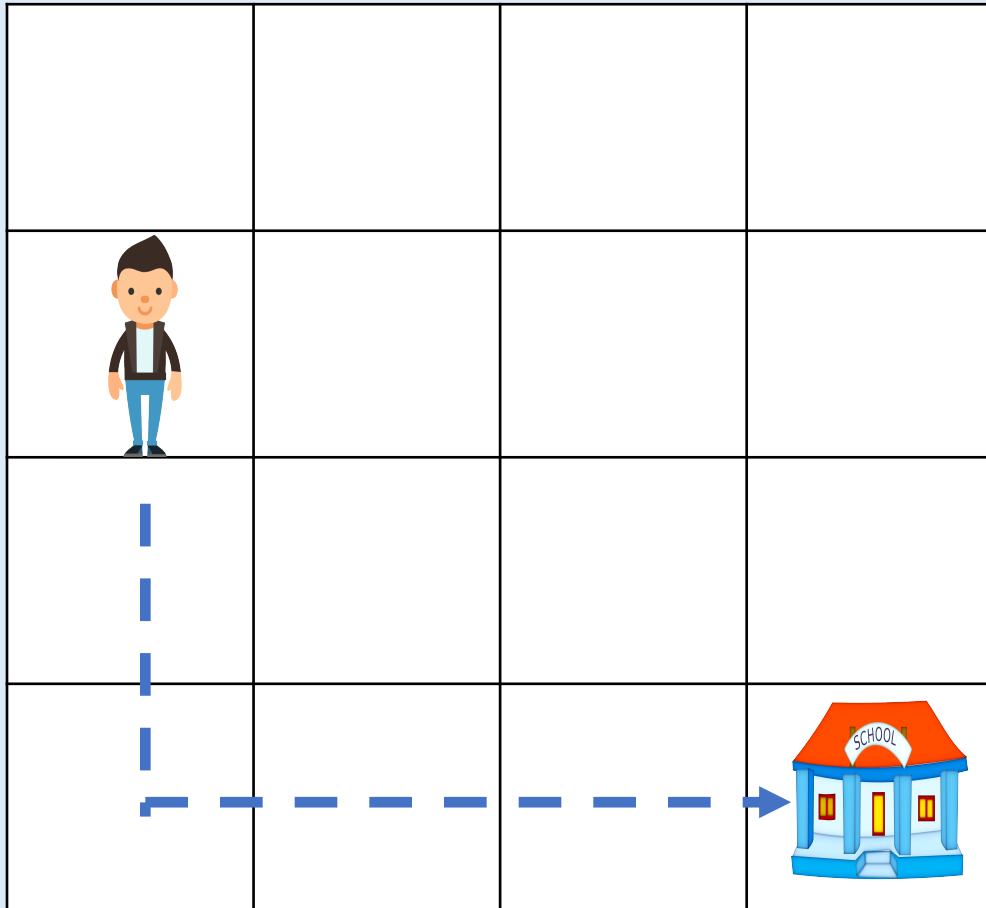
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Activity 1

Describing Movement and Turns

Describe the route Dennis takes to school.



Forward _____ squares.

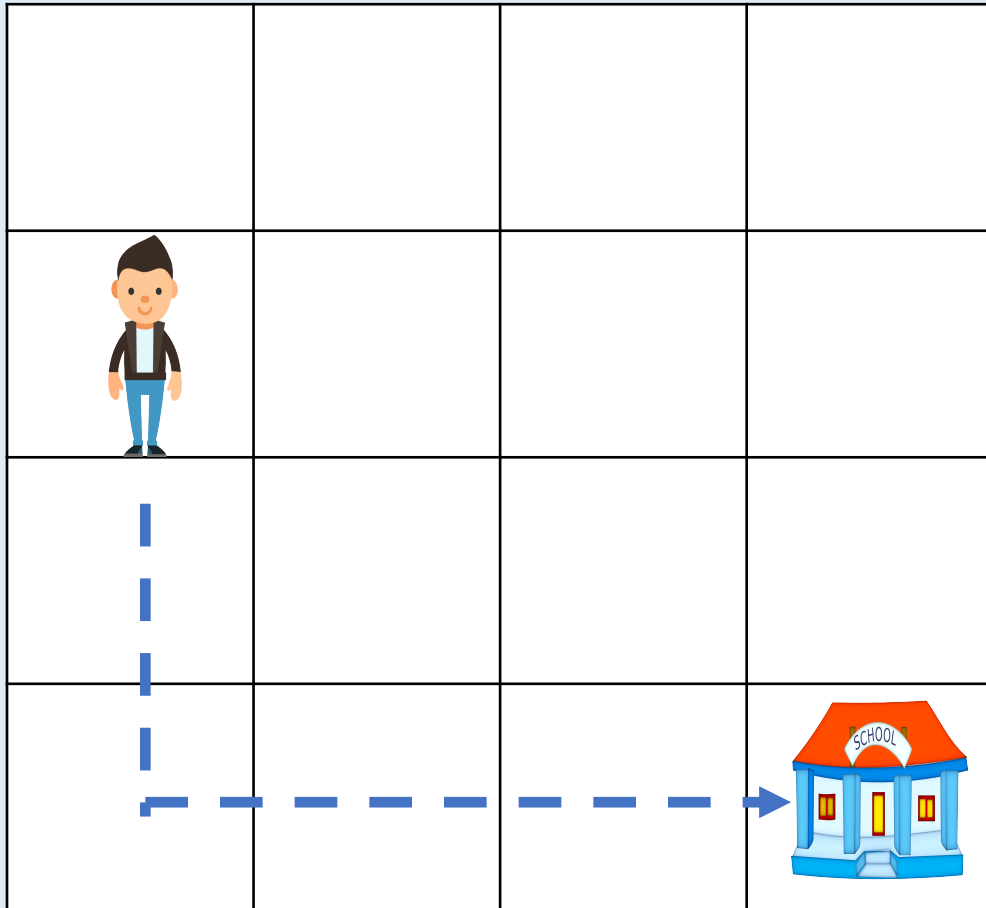
Turn _____.

Forward _____ squares.

Activity 1

Describing Movement and Turns

Describe the route Dennis takes to school.



Forward two squares.

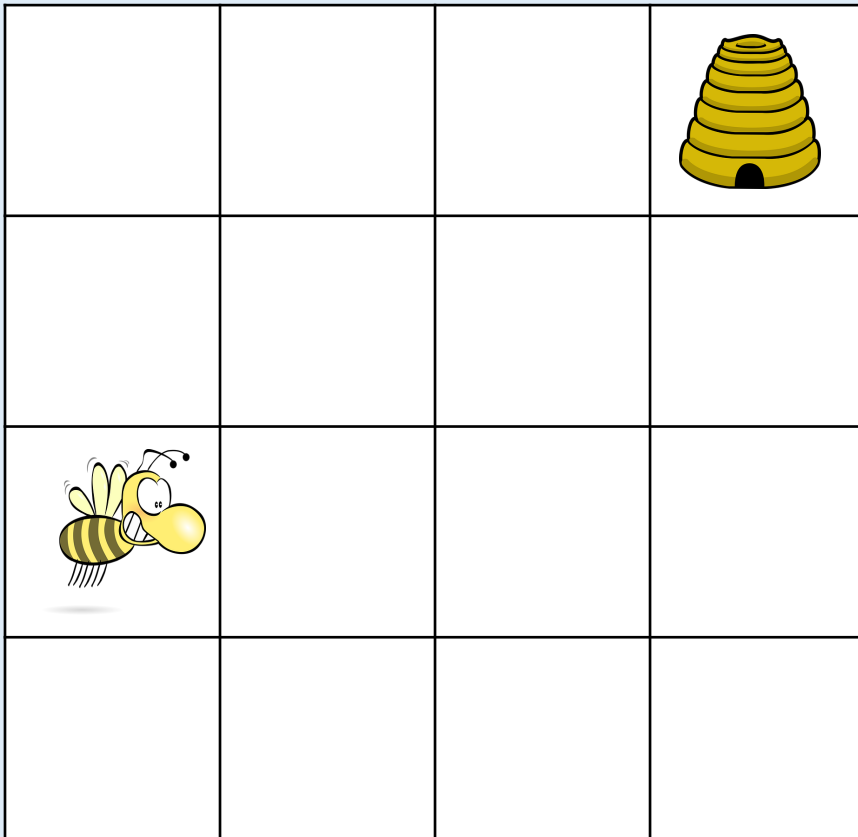
Turn left.

Forward three squares.

Activity 2

Describing Movement and Turns

Draw the route to show these directions.



Forward 1 square. Turn left.

Forward 1 square, quarter turn anticlockwise.

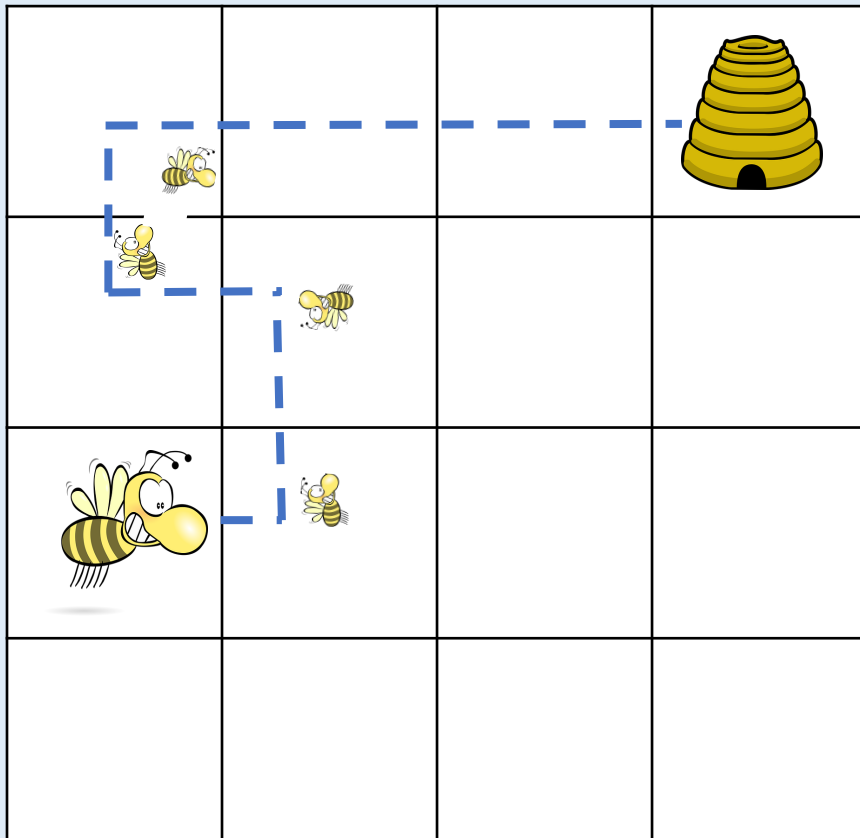
Forward 1 square. Make a quarter turn clockwise.

Forward 1 square. Make a quarter turn clockwise. Forward 3 squares.

Activity 2

Describing Movement and Turns

Draw the route to show these directions.



Forward 1 square. Turn left.

Forward 1 square, quarter turn anticlockwise.

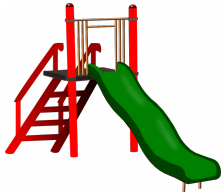



Forward 1 square. Make a quarter turn clockwise.

Forward 1 square. Make a quarter turn clockwise. Forward 3 squares.

Activity 3

Describing Movement and Turns

Write the directions for Dennis to get to each place on the map.





			
			
			
			



Activity 3

Describing Movement and Turns

Write the directions for Dennis to get to each place on the map.



Half turn clockwise. Forward 1 square.
Turn right. Forward 3 squares.



Forward 1 square. Turn left.
Forward 3 squares.



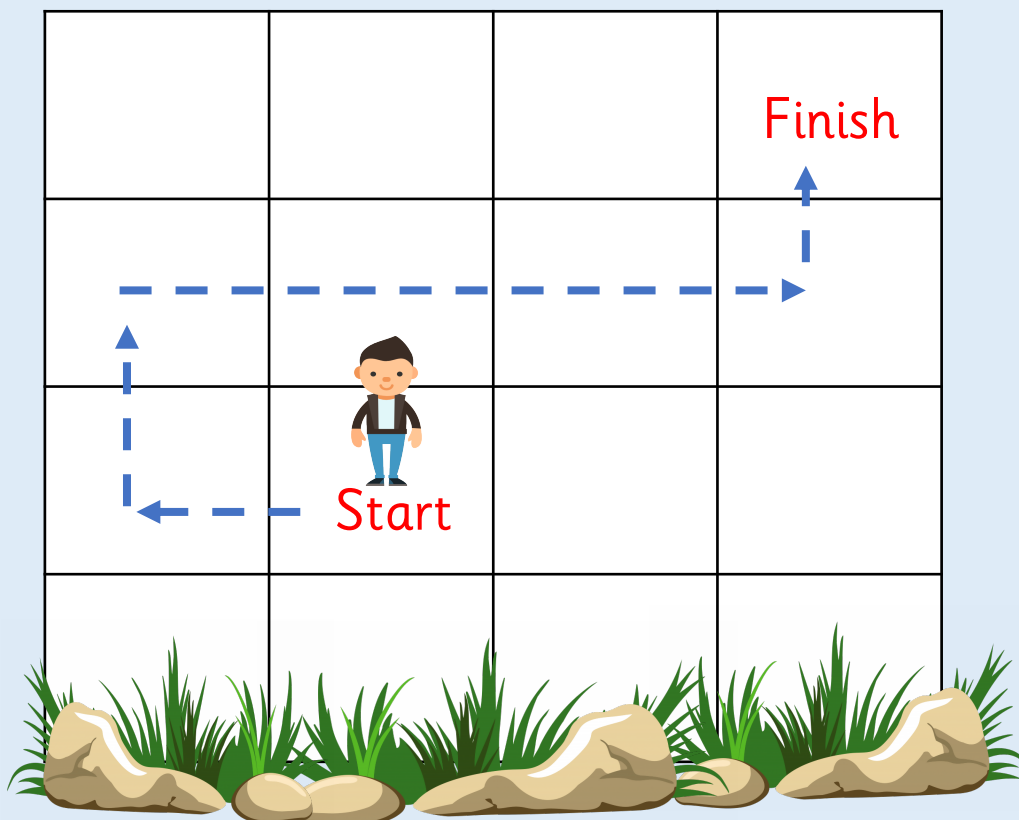
Forward 2 squares. Turn left.
Forward 1 square.

Reasoning 1

Describing Movement and Turns

How many different routes can you find to get from start to finish?

Use the words 'forwards', 'backwards', 'clockwise', 'anticlockwise' and 'quarter turn'.

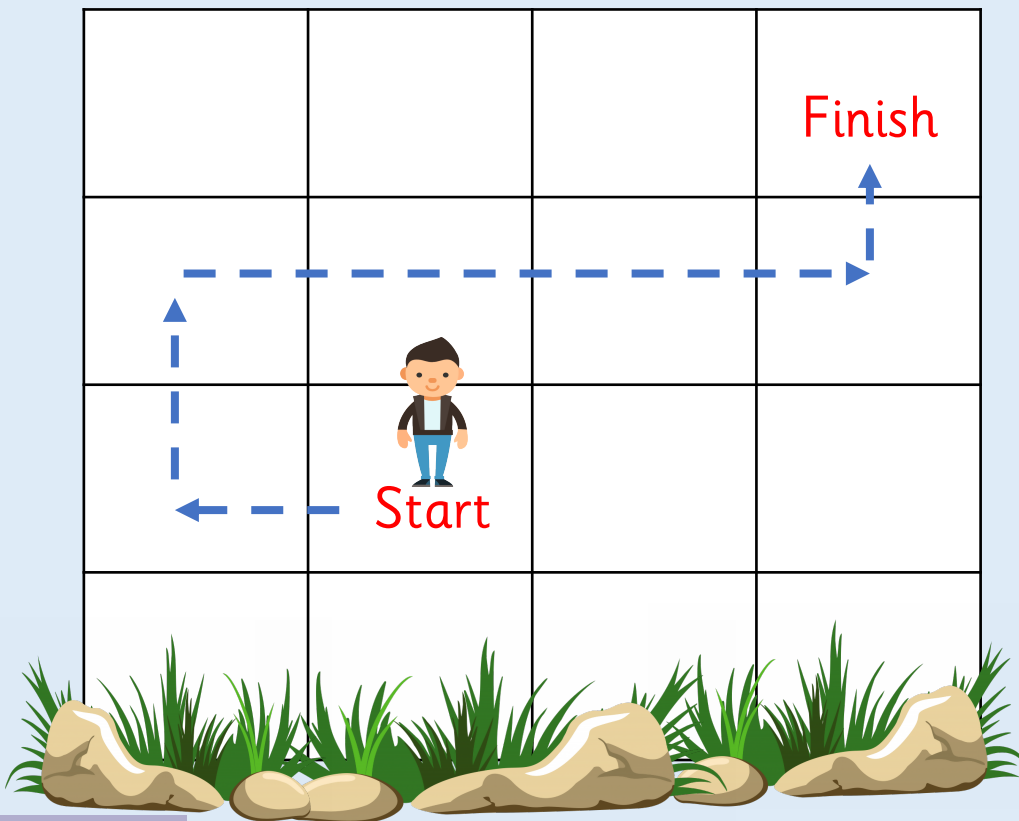


Reasoning 1

Describing Movement and Turns

How many different routes can you find to get from start to finish?

Use the words 'forwards', 'backwards', 'clockwise', 'anticlockwise' and 'quarter turn'.



Turn a quarter clockwise.
Forward 1.

Turn a quarter clockwise.
Forward 1.

Turn a quarter clockwise.
Forward 3.

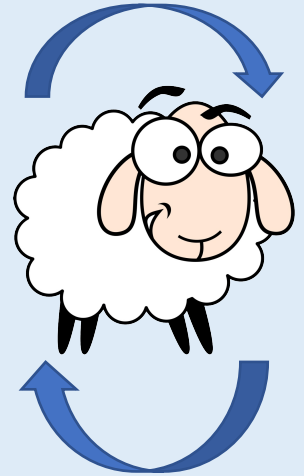
Turn a quarter
anticlockwise. Forward 1.

Is Ken correct?



A quarter turn clockwise is the same as a three-quarter turn anticlockwise.

Convince me.

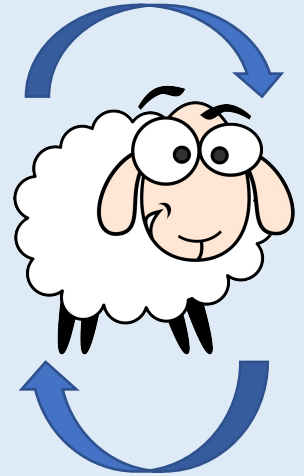


Is Ken correct?



A quarter turn clockwise is the same as a three-quarter turn anticlockwise.

Convince me.



Possible answer:

Ken is correct.

A quarter turn clockwise is the same as a three-quarter turn anticlockwise.

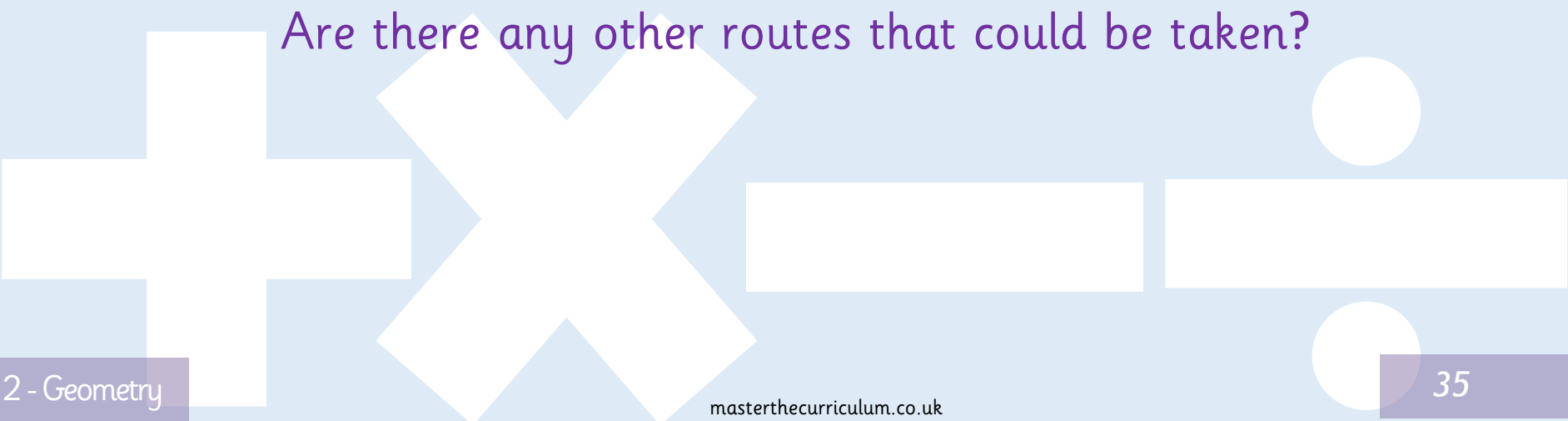
Children may use objects/small figures to show their reasoning.

Which direction is ____ facing to begin with?
Why is this important?

Is ____ moving or just changing direction?
How do you know?

How can we record the directions given?

Are there any other routes that could be taken?



Making Patterns with Shapes

2



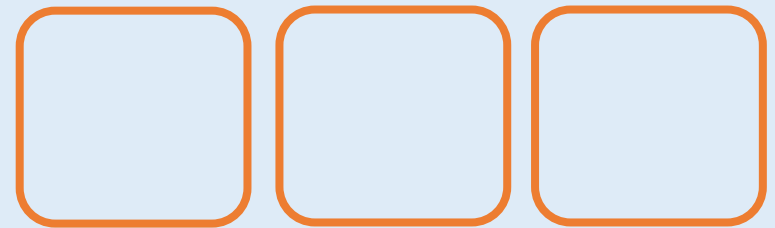
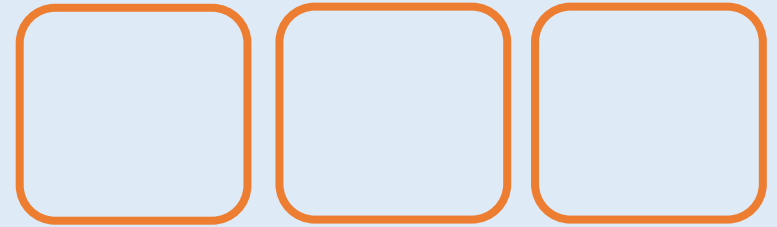
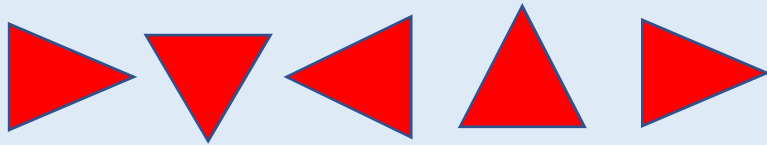
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Activity 1

Making Patterns with Shapes

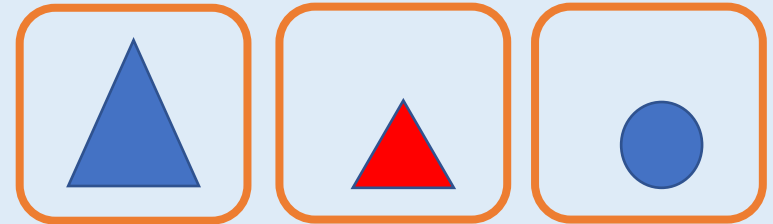
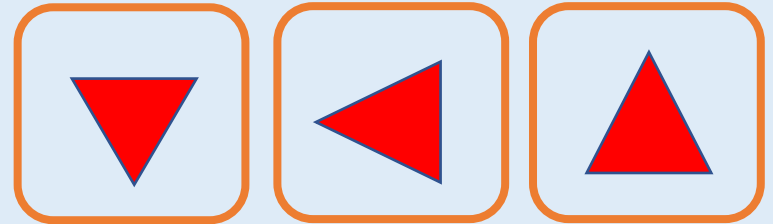
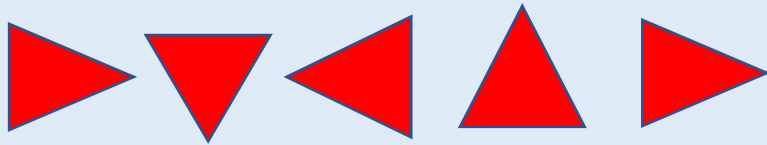
Continue these patterns by adding the next three shapes.



Activity 1

Making Patterns with Shapes

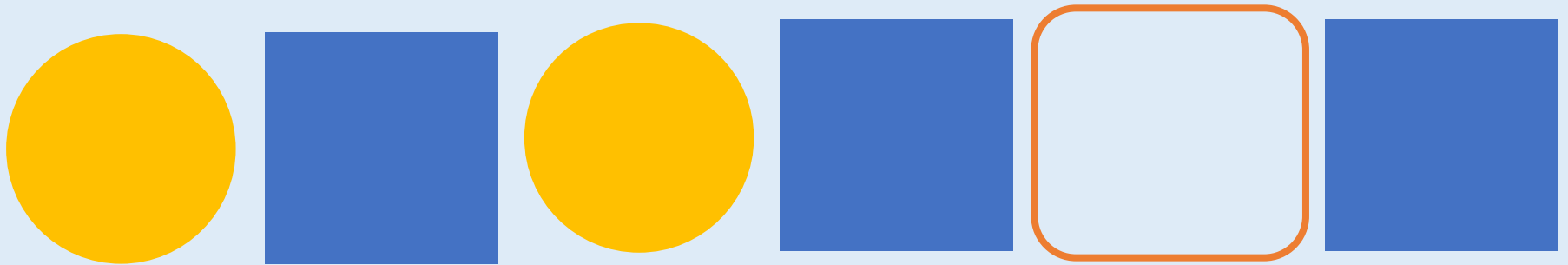
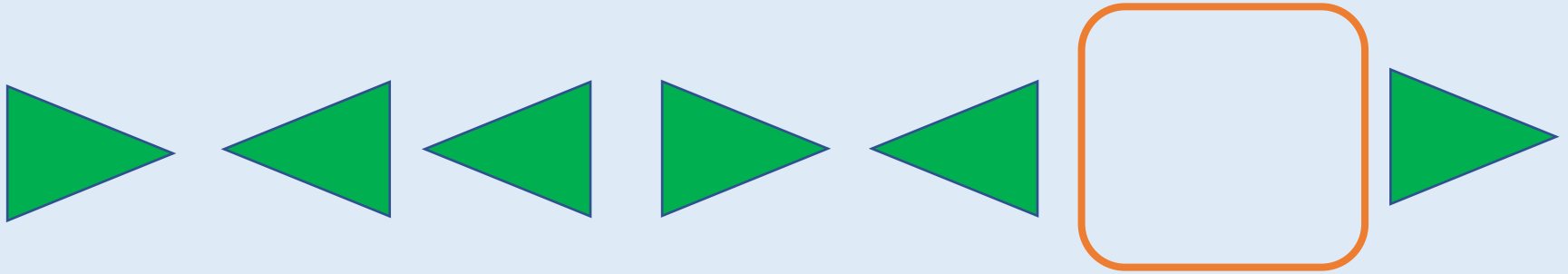
Continue these patterns by adding the next three shapes.



Activity 2

Making Patterns with Shapes

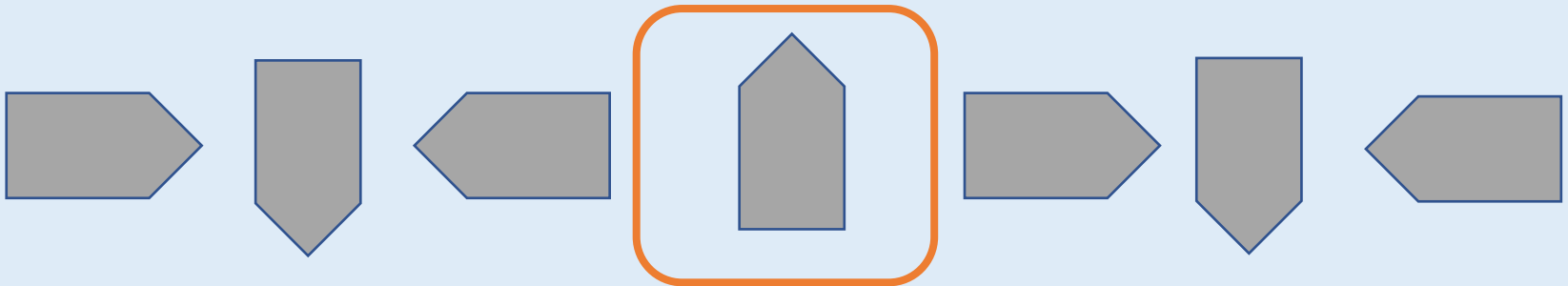
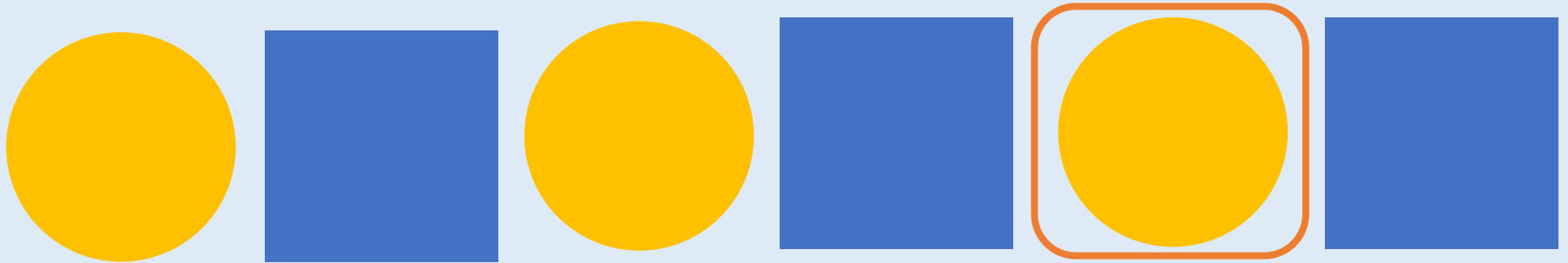
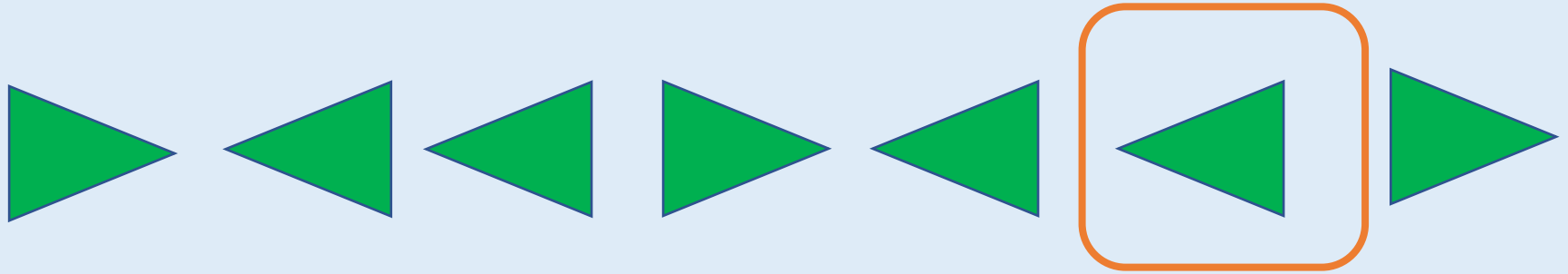
Fill in the missing shapes to complete the patterns.



Activity 2

Making Patterns with Shapes

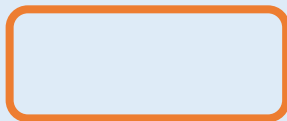
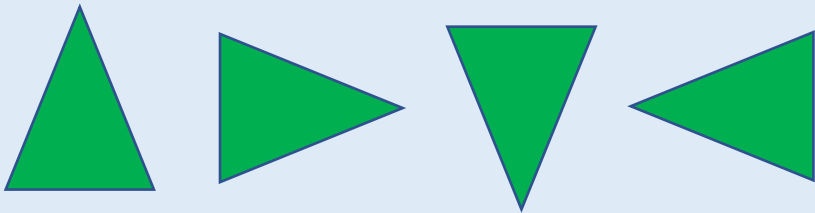
Fill in the missing shapes to complete the patterns.



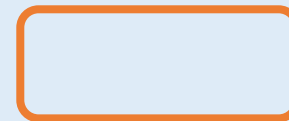
Activity 3

Making Patterns with Shapes

Describe the turn of each pattern.



turn

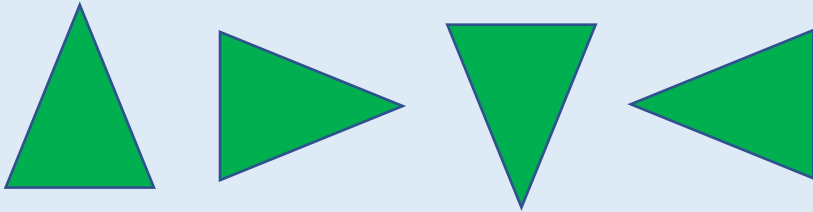


turn

Activity 3

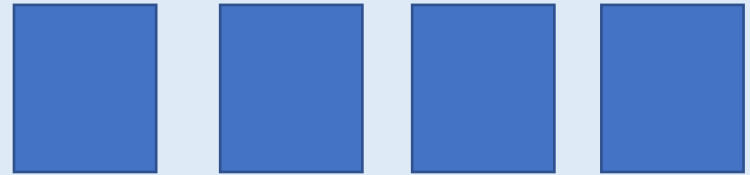
Making Patterns with Shapes

Describe the turn of each pattern.



quarter

turn



full

turn

Reasoning 1

Making Patterns with Shapes

Describe the turn of each pattern.

How many different patterns can you create using this shape?



Who is correct?



John

The rule is turn the shape a quarter turn.

The rule is turn the shape three quarters.



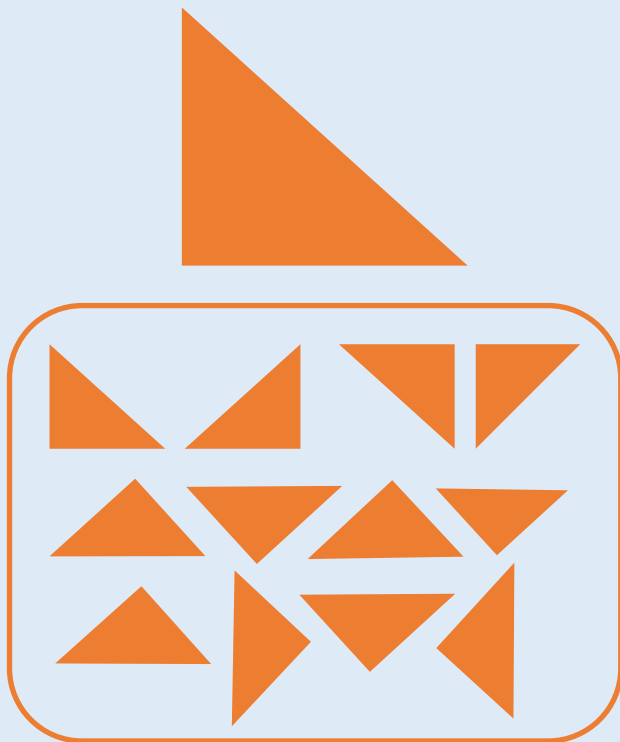
Rose

Reasoning 1

Making Patterns with Shapes

Describe the turn of each pattern.

How many different patterns can you create using this shape?

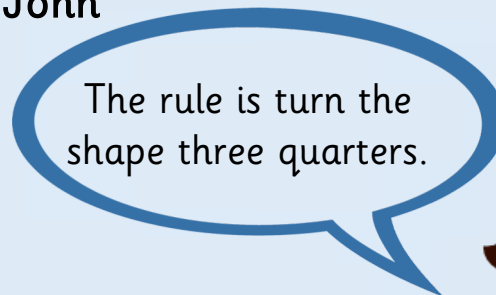


Who is correct?



John

The rule is turn the shape a quarter turn.



Rose

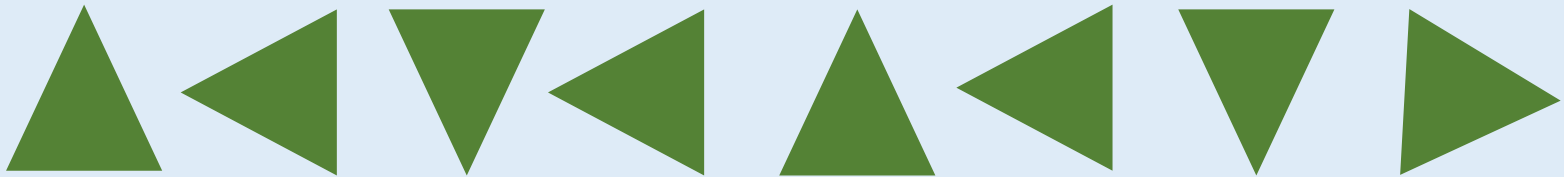
The rule is turn the shape three quarters.

John and Rose could both be correct as no direction is given. John may be turning clockwise and Rose anticlockwise.

Reasoning 2

Making Patterns with Shapes

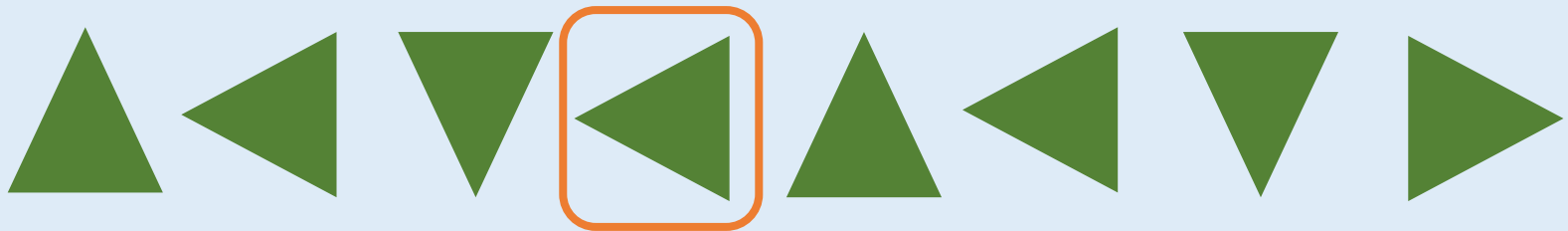
Spot the mistake in each pattern. Explain why they are incorrect.



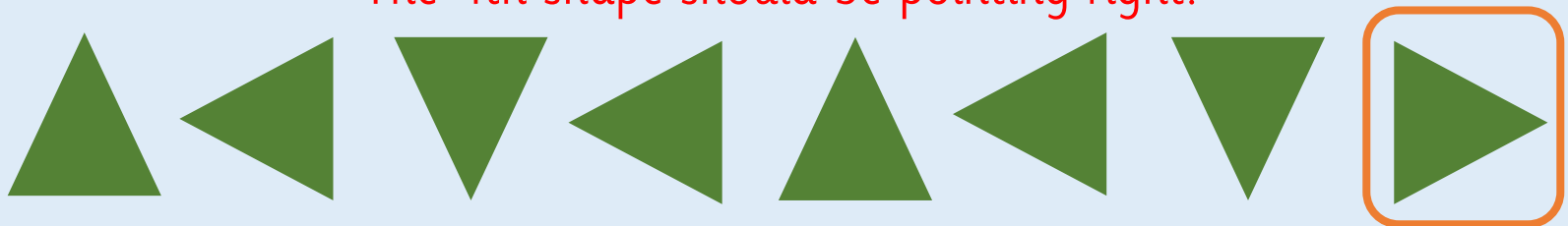
Reasoning 2

Making Patterns with Shapes

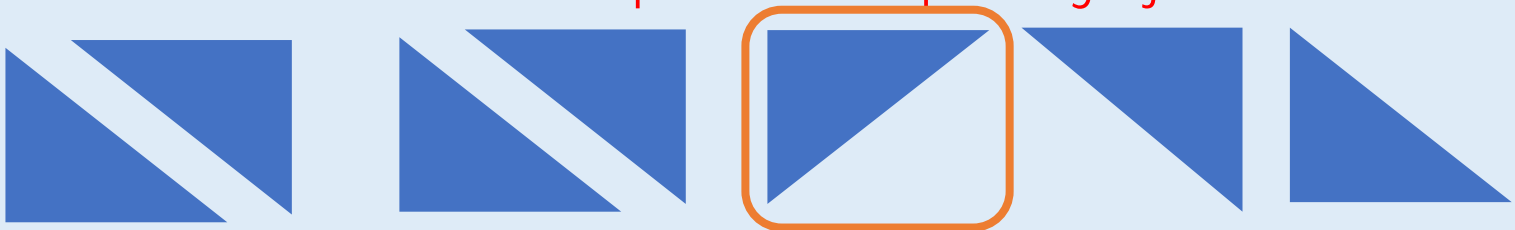
Spot the mistake in each pattern. Explain why they are incorrect.



The 4th shape should be pointing right.



Or the 8th shape should be pointing left.



The 5th shape has not made half a turn.

What is happening in the pattern?

What would the next shape look like?

How would you describe its position?

How can we work out the missing shape?

