## Step 4: Translation

## National Curriculum Objectives:

Mathematics Year 5: (5P2) Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed

## Differentiation:

Questions 1,4 and 7 (Varied Fluency)
Developing Questions to support identifying translated shapes. Includes $1 \times 1$ squares only. Expected Questions to support identifying translated shapes. Includes regular polygons with a maximum of six sides.
Greater Depth Questions to support identifying and drawing translated shapes. Includes irregular polygons with a maximum of eight sides.

Questions 2, 5 and 8 (Varied Fluency)
Developing Questions to support understanding of the instructional language used in translations. Only includes $1 \times 1$ squares.
Expected Questions to support understanding of the instructional language used in translations. Includes regular polygons with a maximum of six sides.
Greater Depth Questions to support understanding of the instructional language used in translations. Includes irregular shapes with up to eight sides.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Use knowledge and understanding of translation to prove whether a statement is correct. Only includes $1 \times 1$ squares.
Expected Use knowledge and understanding of translation to prove whether a statement is correct. Includes regular polygons with a maximum of six sides.
Greater Depth Use knowledge and understanding of translation to prove whether a statement is correct. Includes irregular shapes with up to eight sides.

## More Year 5 Position and Direction resources.

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

## Translation

1. Tick the translation of Shape A which has been translated 1 left and 5 down.

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|  |  |  |  |  |  |  | A |  |  |  |  |
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|  | 1 |  |  |  |  | 2 |  |  | 3 |  |  |

2. Shape B has been translated three times. Which translation is the odd one out?

|  |  |  |  |  |  |  |  |  |  | 2 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
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|  |  | B |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  | 3 |  |  |
|  |  | 1 |  |  |  |  |  |  |  |  |  |

3. Maeve has translated Shape C 4 right and 6 up.

She says,

If I switch the numbers around, Shape C will still arrive at the position of Shape 1.


Do you agree? Explain your answer.

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|  |  |  |  | C |  |  |  |  |  |  |  |
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## Translation

4. Tick the translation of Shape A which has been translated 6 right and 4 down.

5. Shape C has been translated four times. Which translation is the odd one out?

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6. Imogen has translated Shape B 5 right and 2 up.

She says,

If I switch the numbers around, Shape B will still arrive at the position of Shape 1.

Do you agree? Explain your answer.

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## Translation

7. Tick the translation of Shape A which has been translated 1 left and 5 down.

8. Shape B has been translated four times. Which translation is the odd one out?

9. Aurora has translated Shape C 4 left and 5 up.

She says,

If I switch the numbers around, Shape C will not arrive at the position of Shape 1.

Do you agree? Explain your answer.



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## Homework/Extension

## Translation

## Developing

1. Shape 2
2. Various possible answers. For example, Shape 1 is the odd one out as it is the only translation shown that has not moved left/right.
3. If Shape $C$ translates 6 right and 4 up instead, it will not arrive at the same position as Square 1 so Maeve is incorrect.

## Expected

4. Shape 3
5. Various possible answers. For example, Shape 1 could be the odd one out because it is the only translation that has not moved up/down.
6. If Shape B translates 2 right and 5 up instead, it will not arrive at the same position as Square 1 so Imogen is incorrect.

## Greater Depth

7. Shape 1
8. Various possible answers. For example, Shape 4 is the odd one out because when its total movement is added together, it does not equal 6.
9. If Shape C translates 5 left and 4 up instead, it will not arrive at the same position as Square 1 so Aurora is correct.
