

Homework

Reflection with Coordinates

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 Identify whether a statement is true or false by reflecting a shape with coordinates. Includes horizontal and vertical mirror lines. Limited to regular polygons with up to 4 sides.

Expected Identify whether a statement is true or false by reflecting a shape with coordinates. Includes horizontal and vertical mirror lines. Limited to polygons with up to 6 sides.

Greater Depth Identify whether a statement is true or false by reflecting a shape with coordinates. Includes diagonal mirror lines. Irregular shapes with up to 8 sides included.

Questions 2, 5 and 8 (Varied Fluency)

Developing Complete a reflected shape and draw the mirror line. Includes horizontal and vertical mirror lines. Limited to regular polygons with up to 4 sides.

Expected Complete a reflected shape and draw the mirror line. Includes horizontal and vertical mirror lines. Limited to polygons with up to 6 sides.

Greater Depth Complete a reflected shape and draw the mirror line. Includes diagonal mirror lines and irregular shapes with up to 8 sides.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

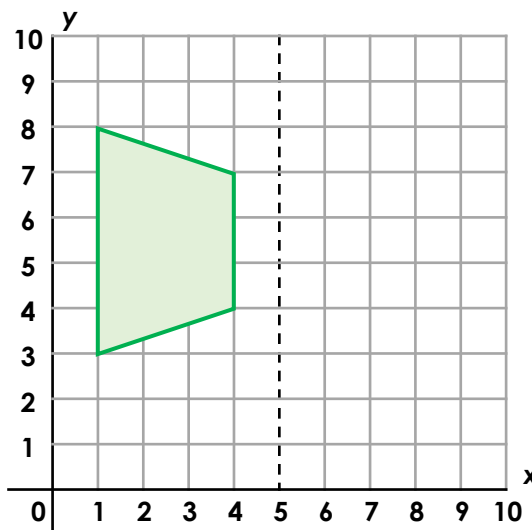
Developing Explain and prove errors when reflecting a shape with coordinates. Includes horizontal and vertical mirror lines. Limited to polygons with up to 4 sides.

Expected Explain and prove errors when reflecting a shape with coordinates. Includes horizontal and vertical mirror lines. Limited to polygons with up to 6 sides.

Greater Depth Explain and prove errors when reflecting a shape with coordinates. Includes diagonal mirror lines. Irregular shapes with up to 8 sides included.

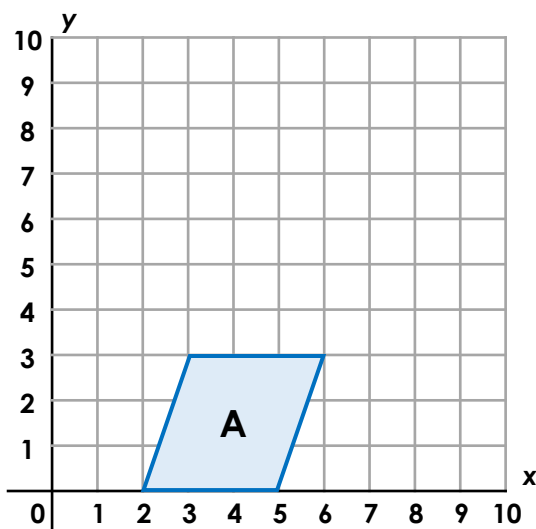
Reflection with Coordinates

1. True or false? If I reflect the shape below in the mirror line, the new coordinates will be (6, 4), (6, 7), (9, 3) and (9, 8).



VF
HW/Ext

2. Complete the missing coordinates to reflect shape A. Draw the mirror line.

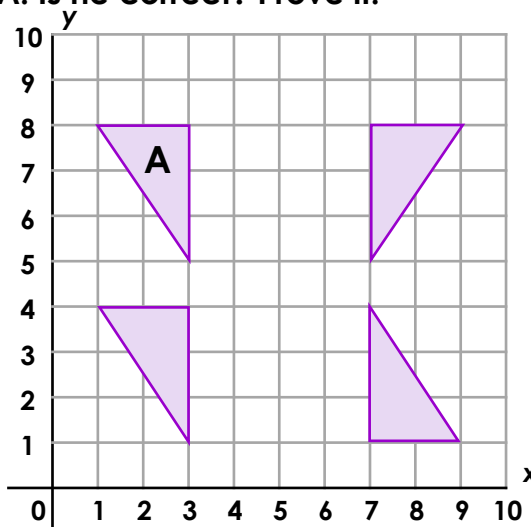


Reflected shape
(2, 10)
(3, 7)



VF
HW/Ext

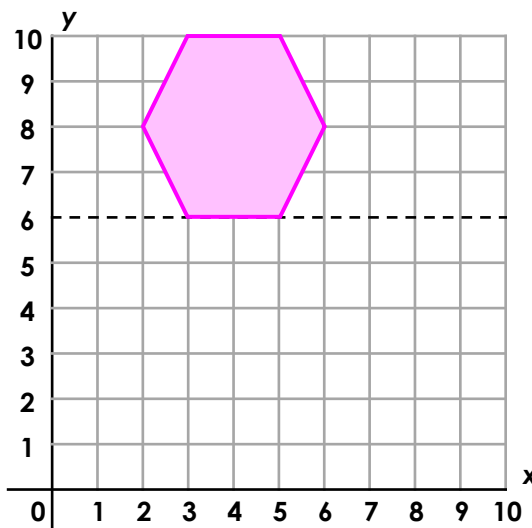
3. Samson thinks that the shape with the coordinates (1, 4), (3, 1) and (3, 4) is the correct reflection of shape A. Is he correct? Prove it.



RPS
HW/Ext

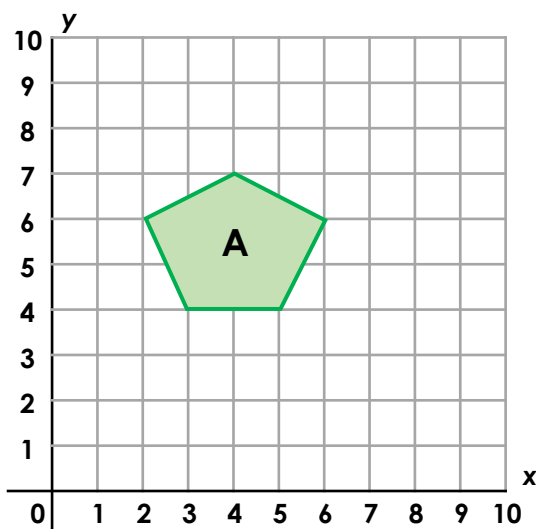
Reflection with Coordinates

4. True or false? If I reflect the shape below in the mirror line, the new coordinates will be (2, 2), (3, 0), (3, 4), (5, 0), (5, 4) and (6, 2).



VF
HW/Ext

5. Complete the missing coordinates to reflect shape A. Draw the mirror line.

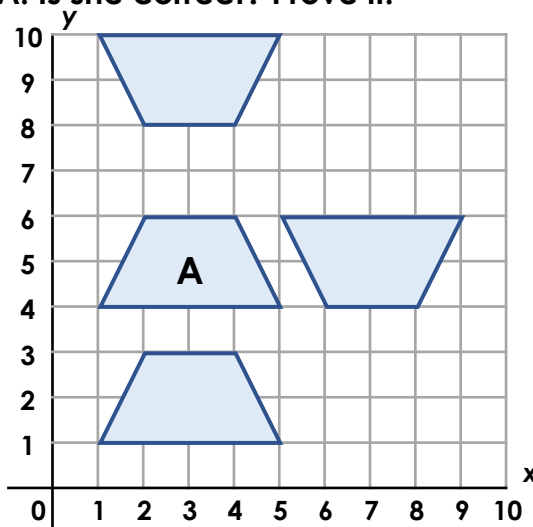


Reflected shape
(6, 6)
(10, 6)



VF
HW/Ext

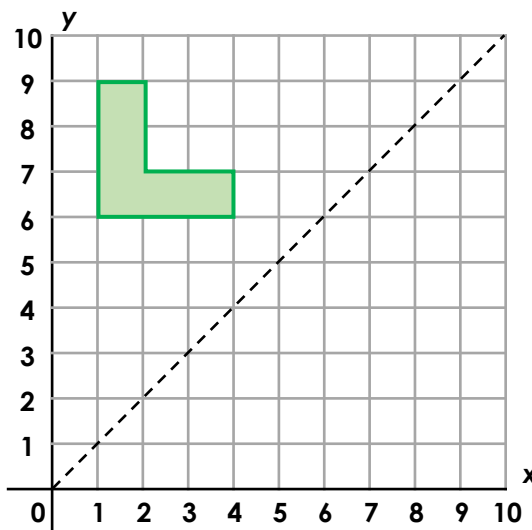
6. Martha thinks that the shape with the coordinates (1, 1), (2, 3), (4, 3) and (5, 1) is the correct reflection of shape A. Is she correct? Prove it.



RPS
HW/Ext

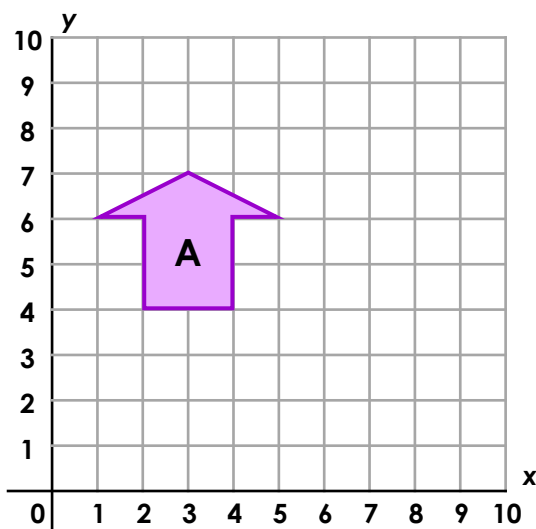
Reflection with Coordinates

7. True or false? If I reflect the shape below in the mirror line, the new coordinates will be (6, 2), (6, 5), (7, 5), (7, 3), (9, 2) and (9, 3).



VF
HW/Ext

8. Complete the missing coordinates to reflect shape A. Draw the mirror line.

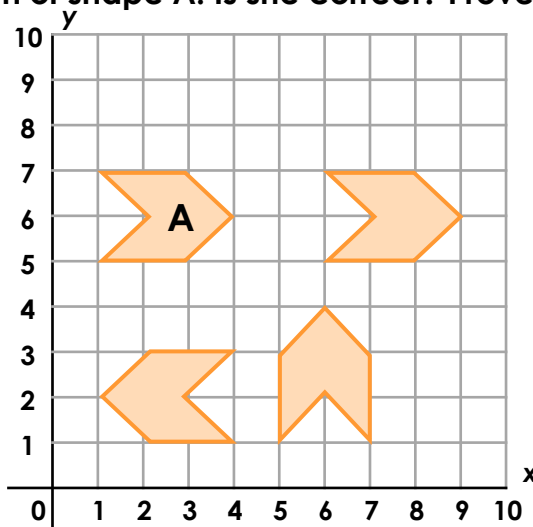


Reflected shape
(4, 4)
(6, 5)



VF
HW/Ext

9. Toni thinks that the shape with the coordinates (1, 2), (2, 1), (2, 3), (3, 2), (4, 1) and (4, 3) is the correct reflection of shape A. Is she correct? Prove it.



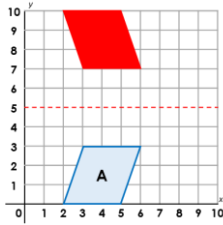
RPS
HW/Ext

Homework

Reflection with Coordinates

Developing

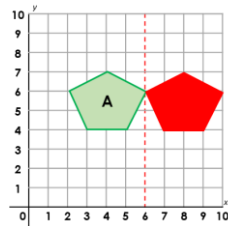
1. True
2. (5, 10) and (6, 7)



3. Samson is incorrect. The correct reflection of shape A has the coordinates (7, 5), (7, 8) and (9, 8).

Expected

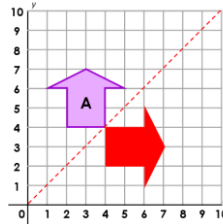
4. False. The correct coordinates are (2, 4), (3, 2), (3, 6), (5, 2), (5, 6) and (6, 4).
5. (7, 4), (8, 7) and (9, 4)



6. Martha is incorrect. The correct reflection of shape A has the coordinates (1, 10), (2, 8), (4, 8) and (5, 10).

Greater Depth

7. False. The correct coordinates are (6, 1), (6, 4), (7, 4), (7, 2), (9, 1) and (9, 2).
8. (6, 1), (6, 2), (6, 4), (4, 2) and (7, 3)



9. Toni is incorrect. The correct reflection of shape A has the coordinates (5, 1), (5, 3), (6, 2), (6, 4), (7, 1) and (7, 3).