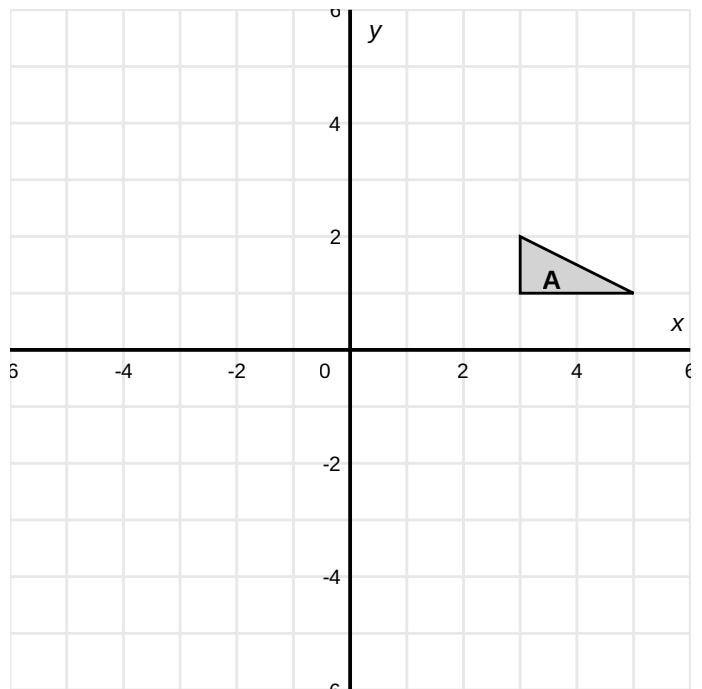

GEOMETRY: TRANSFORMATIONS

Best Guess Mastery Worksheet (Target Grade 4/5)

I Do

Enlarge triangle **A** by scale factor 3 with centre (5, 1).

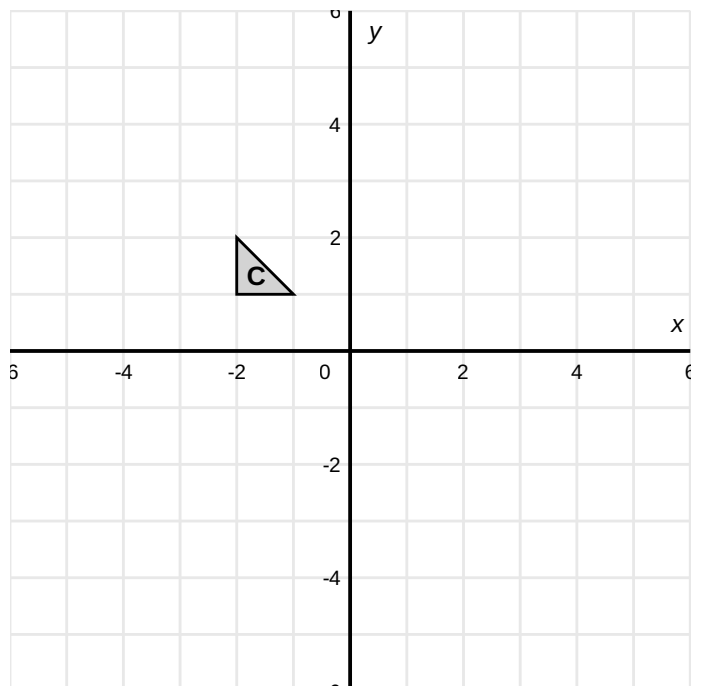
Label the image **B**.



We Do

Enlarge triangle **C** by scale factor 2 with centre $(-4, 0)$.

Label the image **D**.



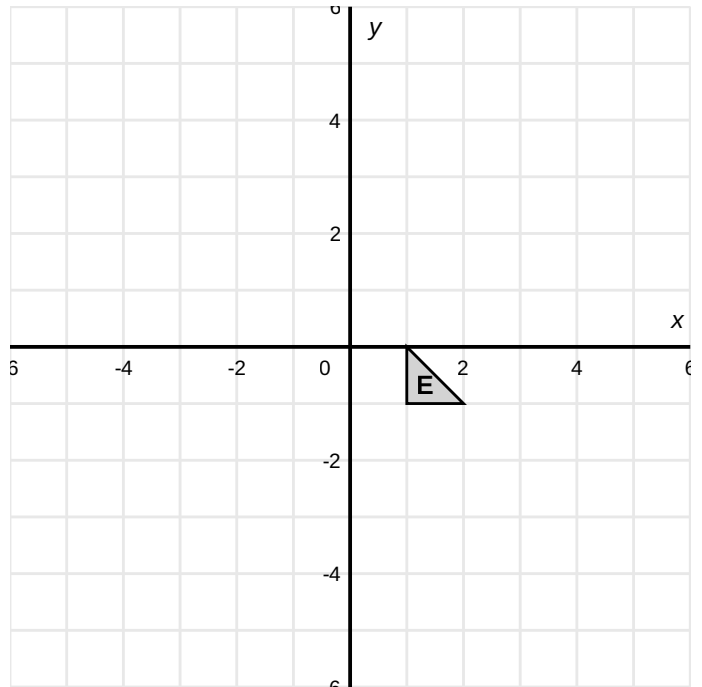
GEOMETRY: TRANSFORMATIONS

Best Guess Mastery Worksheet (Target Grade 4/5)

You Do 1

Enlarge triangle **E** by scale factor 3 with centre $(2, -2)$.

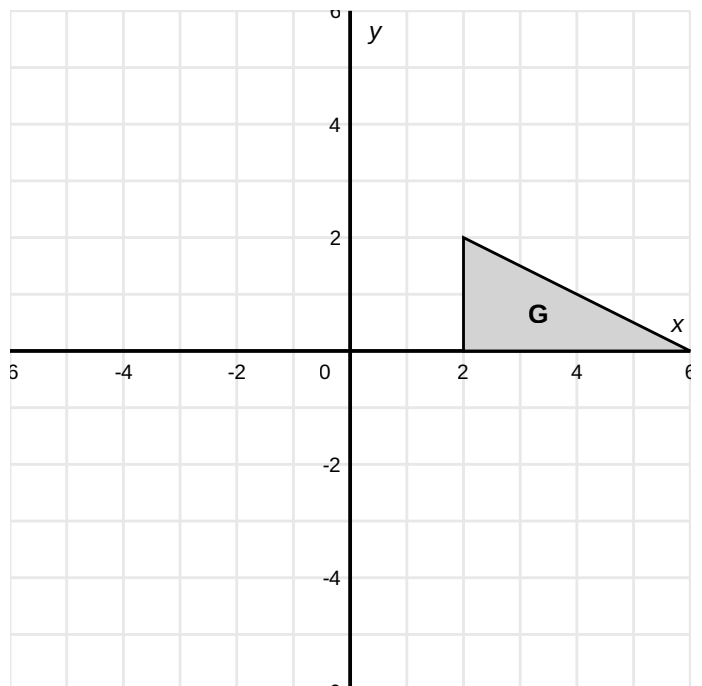
Label the image **F**.



You Do 2

Enlarge triangle **G** by scale factor $\frac{1}{2}$ with centre $(0, 4)$.

Label the image **H**.

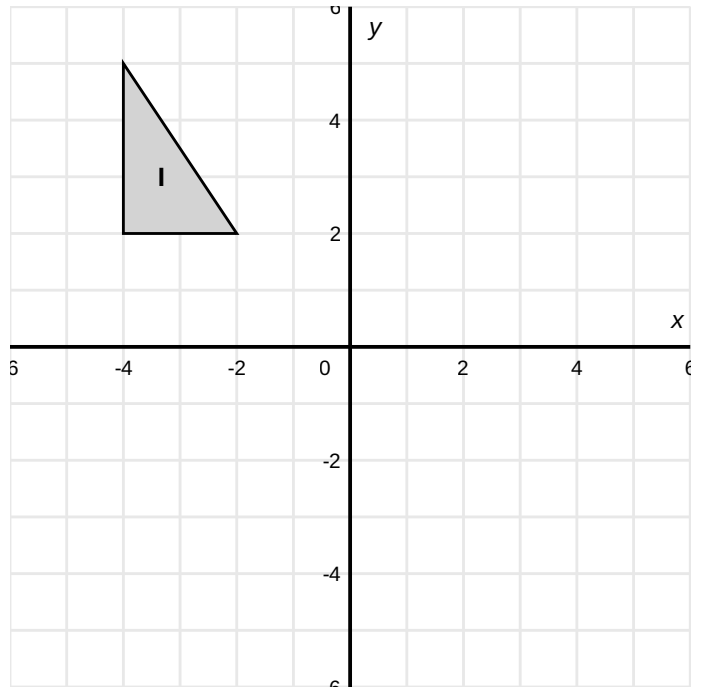


GEOMETRY: TRANSFORMATIONS**Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 3**

Translate triangle **I** by the vector

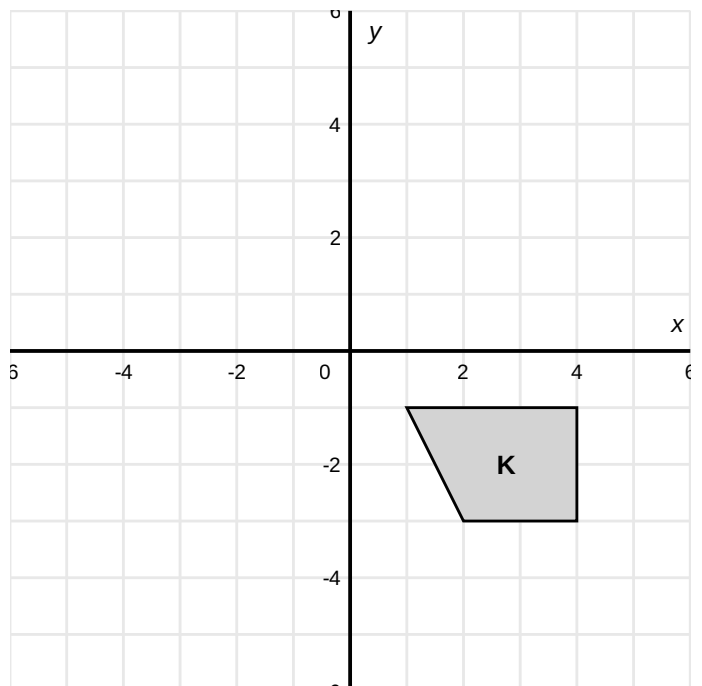
$$\begin{bmatrix} -2 \\ -5 \end{bmatrix}.$$

Label the image **J**.

**You Do 4**

Reflect quadrilateral **K** in the y-axis (the line $x = 0$).

Label the image **L**.



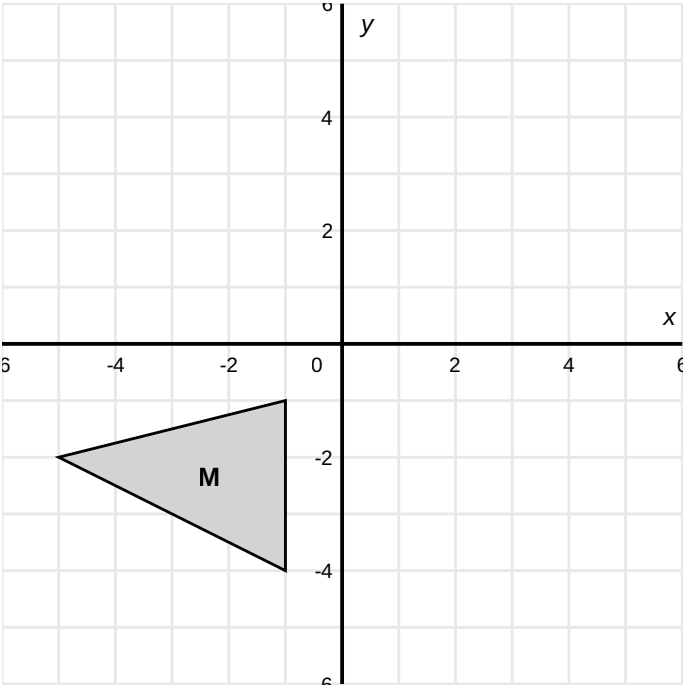
GEOMETRY: DOUBLE TRANSFORMATIONS

Challenge Extreme Section (Target Grade 5/6)

You Do 5

Rotate triangle **M** by 90° clockwise about the origin $(0, 0)$.

Label the image **N**.



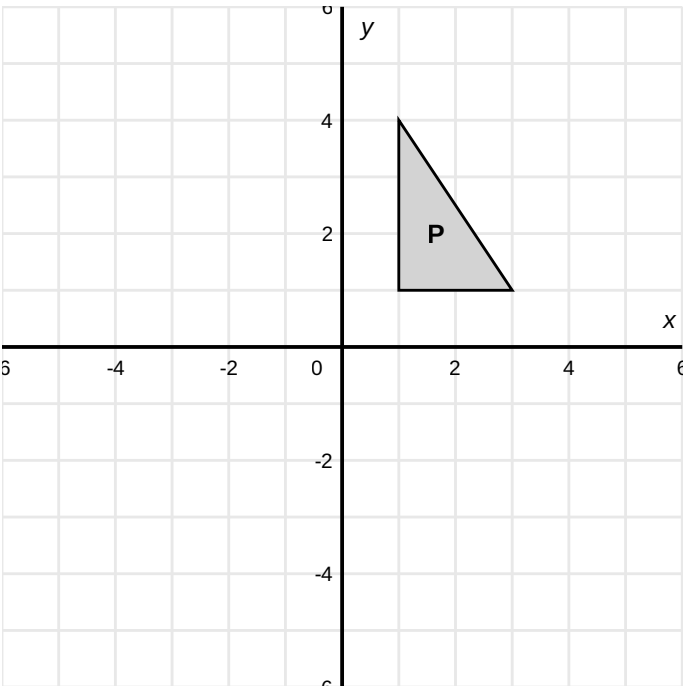
Challenge 1

- 1. Reflect triangle **P** in the x -axis. Label this image **Q**.
- 2. Reflect triangle **Q** in the y -axis. Label this image **R**.

Describe fully the single transformation that maps triangle **P** onto triangle **R**.

.....

.....



GEOMETRY: DOUBLE TRANSFORMATIONS

Challenge Extreme Section (Target Grade 5/6)

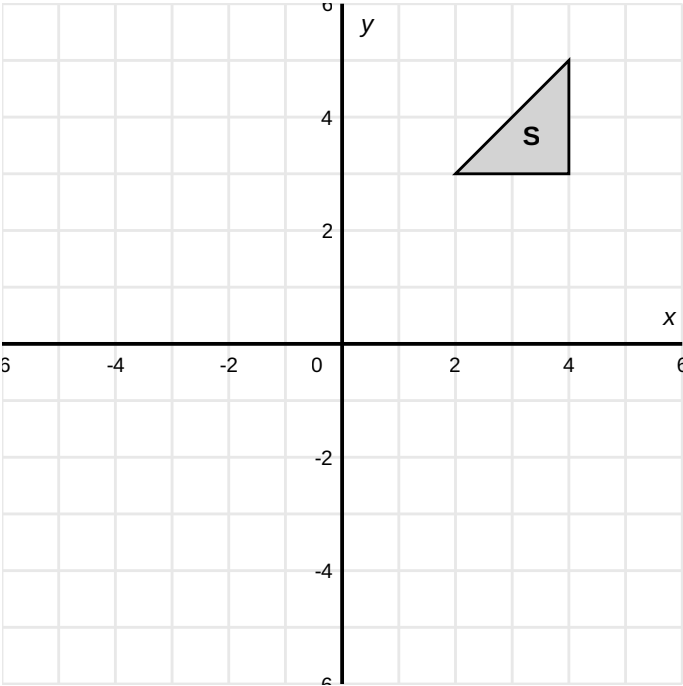
Challenge 2

1. Translate **S** by vector $\begin{bmatrix} 0 \\ -4 \end{bmatrix}$. Label this image **T**.
2. Translate **T** by vector $\begin{bmatrix} -5 \\ -1 \end{bmatrix}$. Label this image **U**.

Describe fully the single transformation that maps triangle **S** onto triangle **U**.

.....

.....



Answers & Worked Solutions (Page 1)

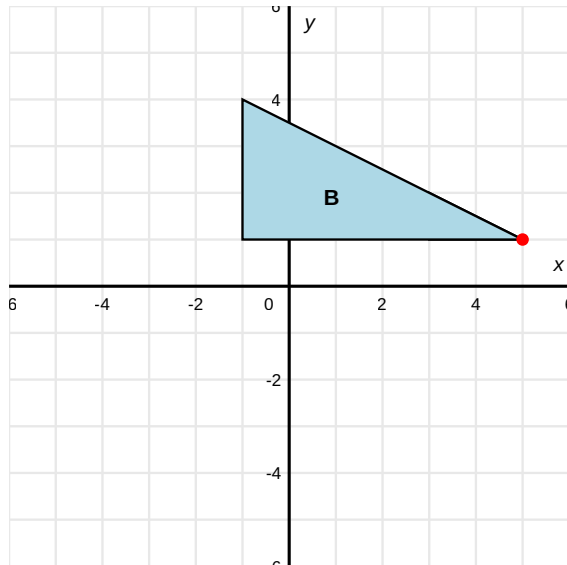
I Do:

Enlargement SF 3 from centre (5, 1).

$$(3, 1) \rightarrow (-1, 1)$$

$$(5, 1) \rightarrow (5, 1)$$

$$(3, 2) \rightarrow (-1, 4)$$



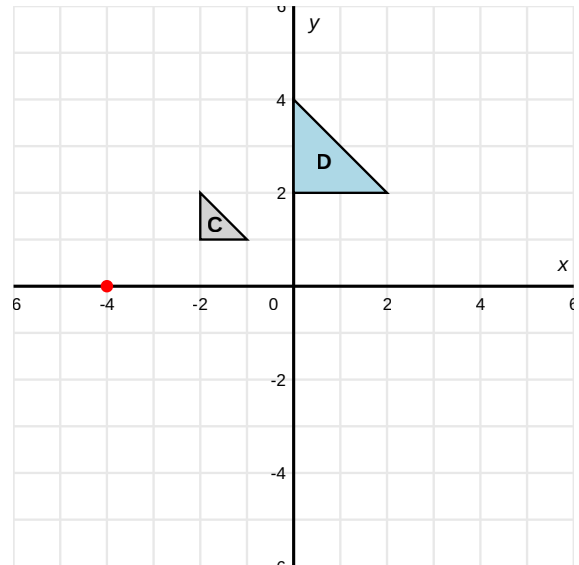
We Do:

Enlargement SF 2 from centre (-4, 0).

$$(-2, 1) \rightarrow (0, 2)$$

$$(-1, 1) \rightarrow (2, 2)$$

$$(-2, 2) \rightarrow (0, 4)$$



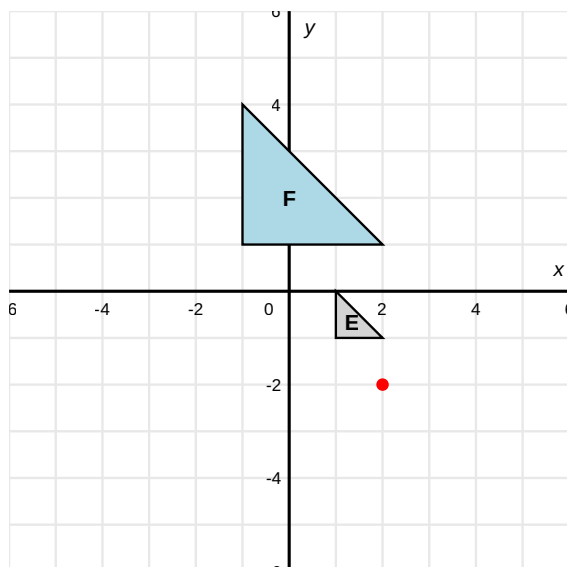
You Do 1:

Enlargement SF 3 from centre (2, -2).

$$(1, -1) \rightarrow (-1, 1)$$

$$(2, -1) \rightarrow (2, 1)$$

$$(1, 0) \rightarrow (-1, 4)$$



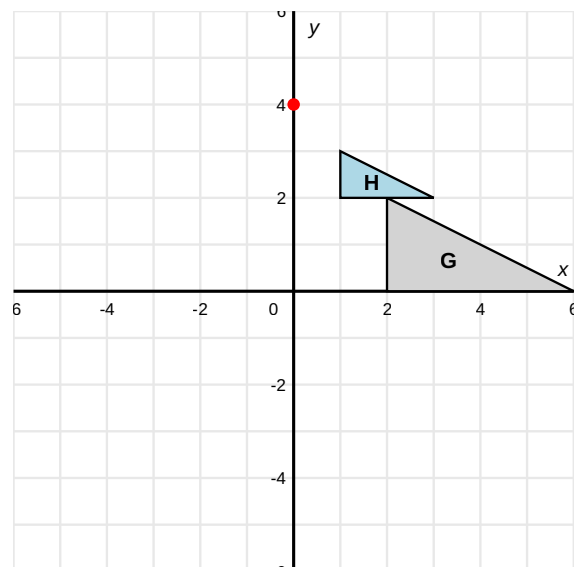
You Do 2:

Enlargement SF 1/2 from centre (0, 4).

$$(2, 0) \rightarrow (1, 2)$$

$$(6, 0) \rightarrow (3, 2)$$

$$(2, 2) \rightarrow (1, 3)$$



Answers & Worked Solutions (Page 2)

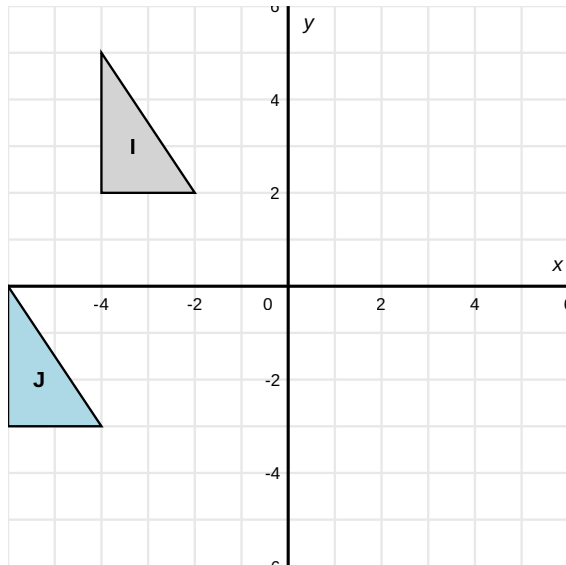
You Do 3:

Translation by vector $(-2, -5)$.

$$(-4, 2) \rightarrow (-6, -3)$$

$$(-2, 2) \rightarrow (-4, -3)$$

$$(-4, 5) \rightarrow (-6, 0)$$



You Do 4:

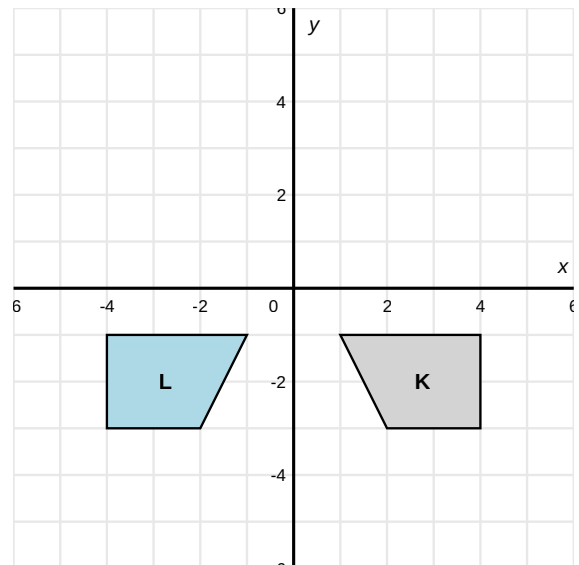
Reflection in the y-axis ($x=0$).

$$(1, -1) \rightarrow (-1, -1)$$

$$(4, -1) \rightarrow (-4, -1)$$

$$(4, -3) \rightarrow (-4, -3)$$

$$(2, -3) \rightarrow (-2, -3)$$



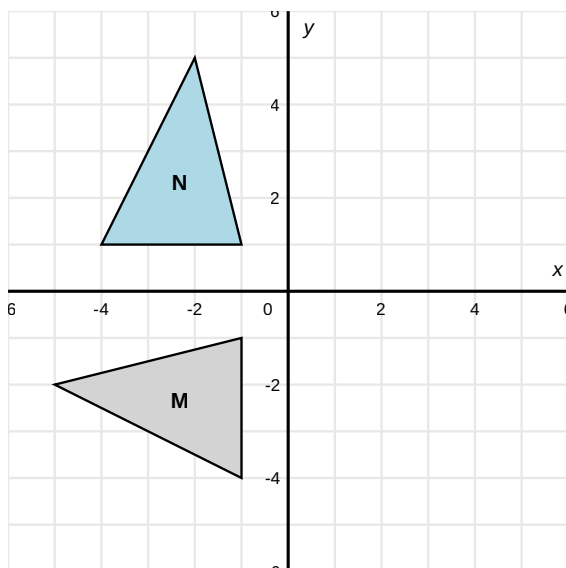
You Do 5:

Rotation 90° CW about $(0,0)$.

$$(-1, -1) \rightarrow (-1, 1)$$

$$(-1, -4) \rightarrow (-4, 1)$$

$$(-5, -2) \rightarrow (-2, 5)$$

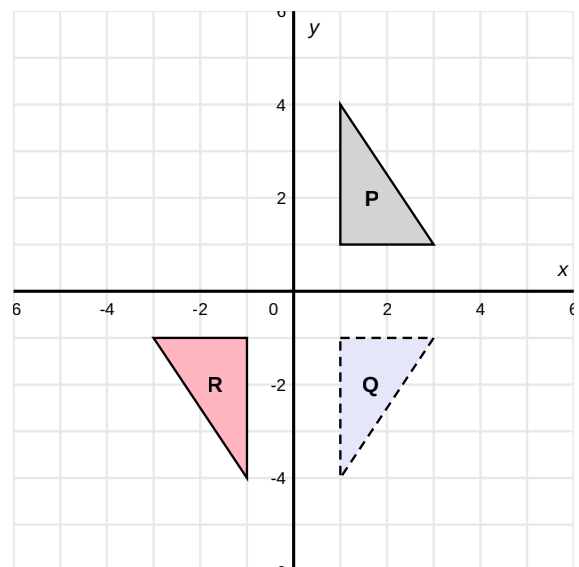


Challenge 1:

Description: Rotation

Angle: 180°

Centre: $(0,0)$ / The Origin



Answers & Worked Solutions (Page 3)

Challenge 2:

Description: Translation

Vector: $\begin{bmatrix} -5 \\ -5 \end{bmatrix}$

(Translations are additive: $-0 + -5$ on x , and $-4 + -1$ on y).

