Name: _____

ASM Tuition Academy

MIXED TRANSFORMATIONS

Instructions:

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
  - there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all you're working out.**

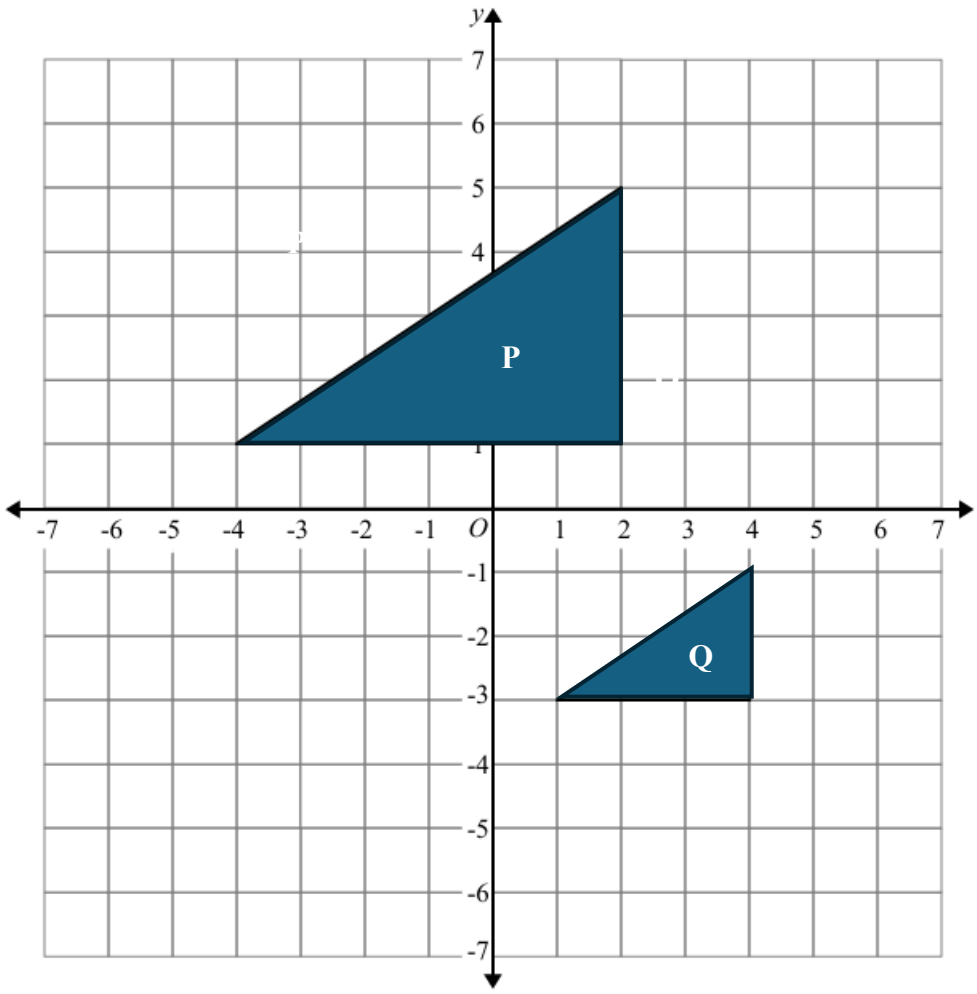
Information:

- The marks for each question are shown in brackets
  - use this as a guide as to how much time to spend on each question.

Advice:

- Read each question carefully before you start to answer it.
- Keep an eye on time.
- Try to answer every question.
- Check your answers if you have time at the end.

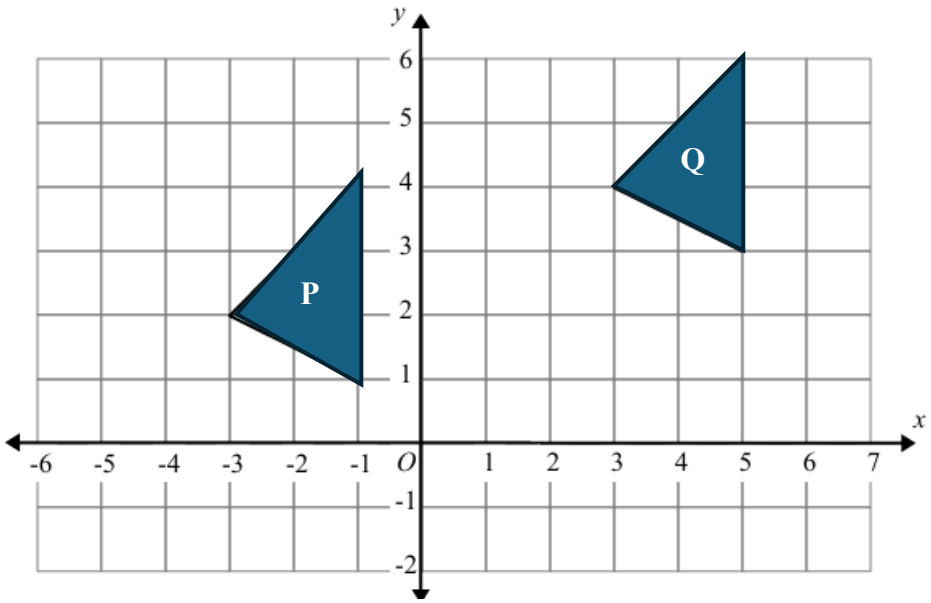
Q1.



Describe fully the single transformation that maps triangle P on triangle Q.

(Total for question 1 is 2 marks)

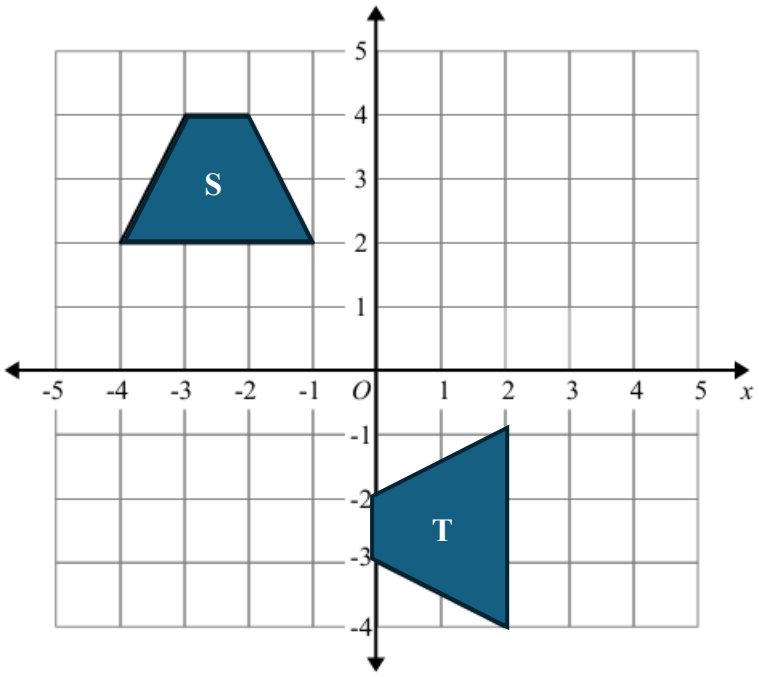
Q2.



Describe fully the single transformation that maps triangle P on triangle Q.

(Total for question 2 is 2 marks)

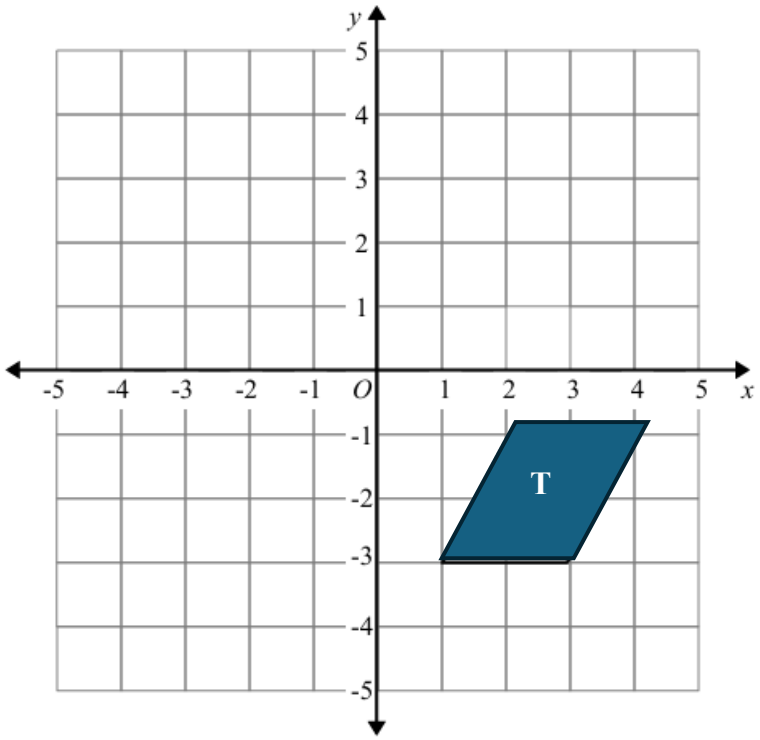
Q3.



Describe fully the single transformation that maps trapezium S on trapezium T.

(Total for question 3 is 2 marks)

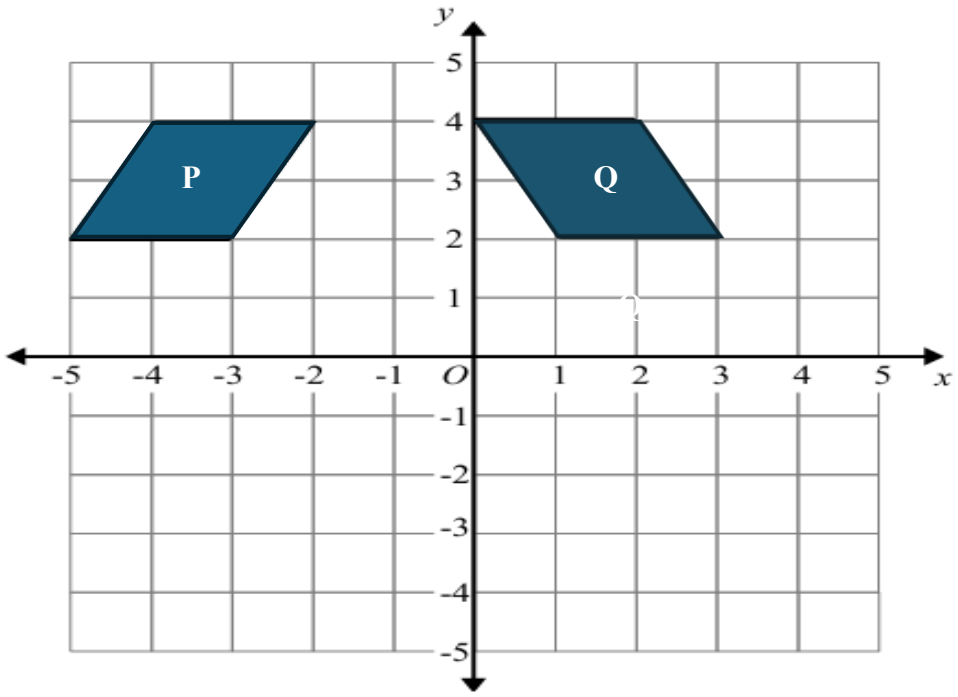
Q4.



Reflect shape T in the line with equation y = x

(Total for question 4 is 2 marks)

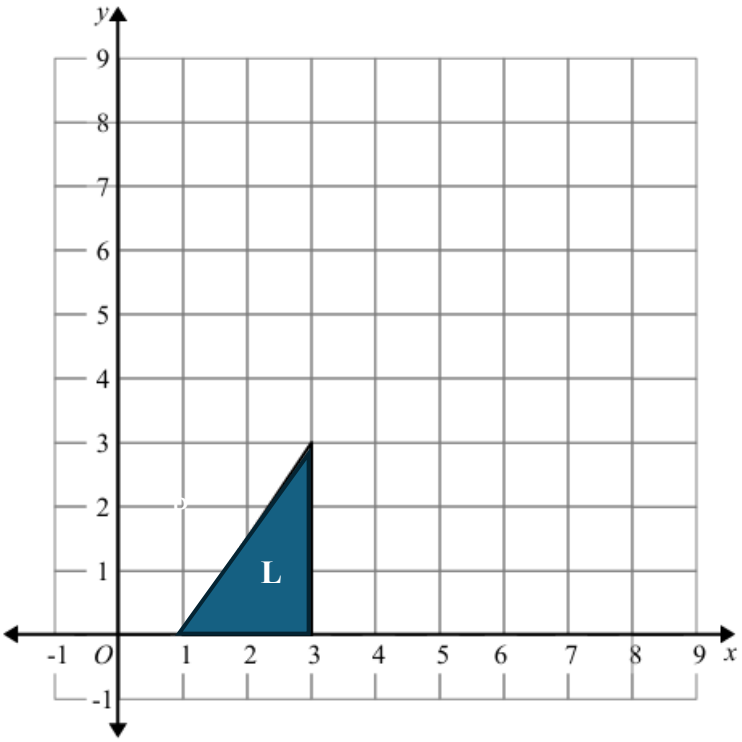
Q5.



Describe fully the single transformation that maps shape P onto shape Q.

(Total for question 5 is 2 marks)

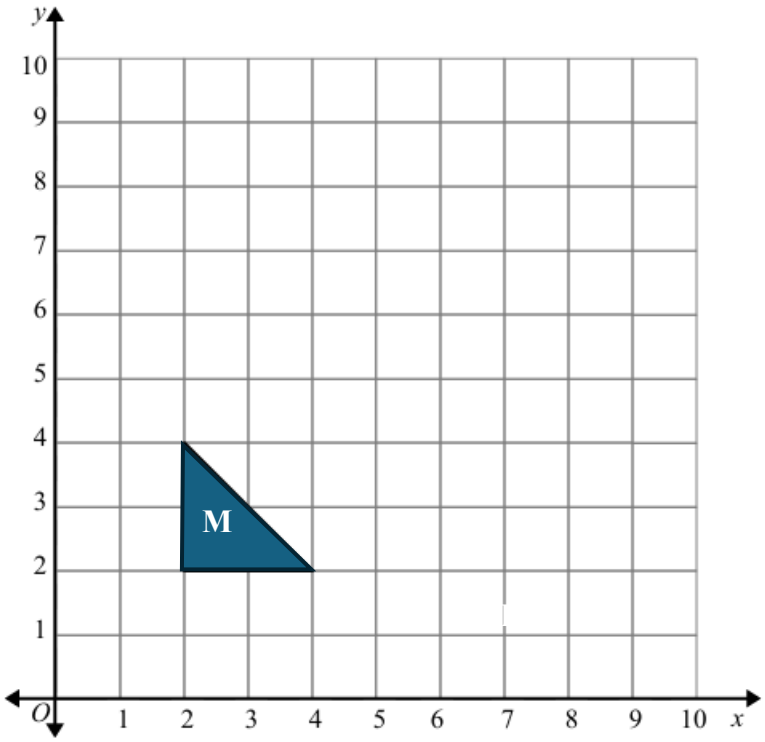
Q6.



Enlarge the shaded triangle L by scale factor 3, centre O

(Total for question 6 is 2 marks)

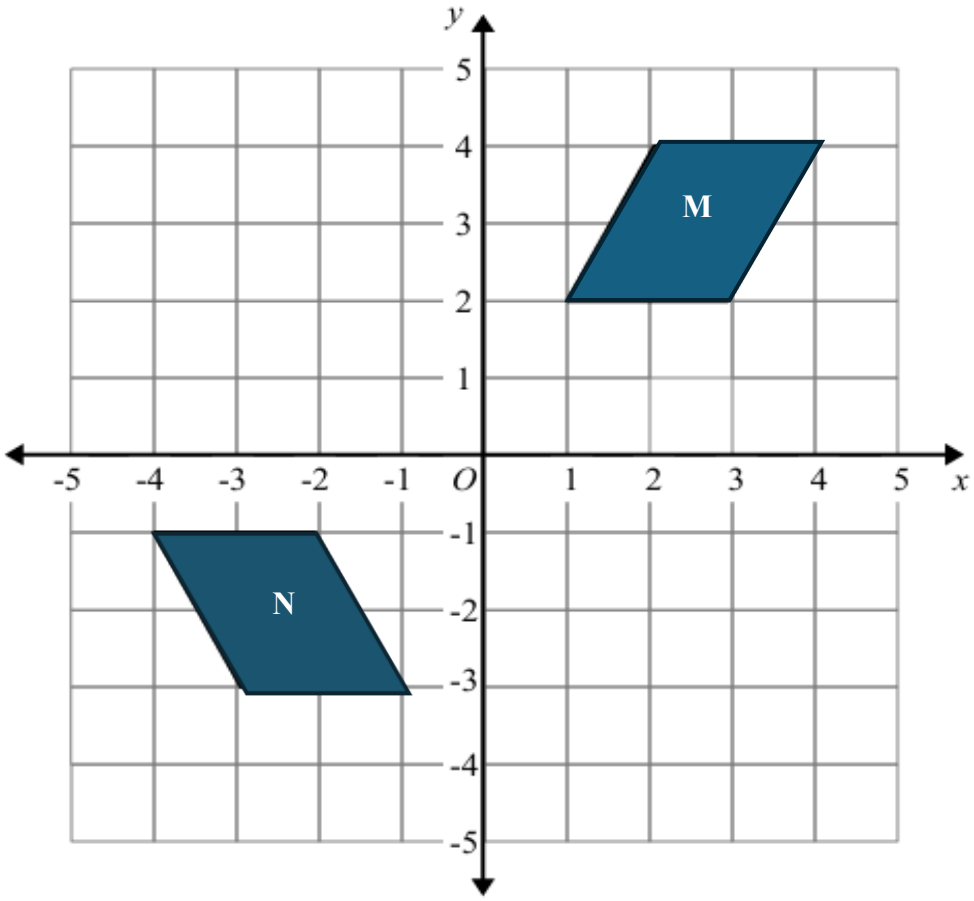
Q7.



Enlarge the shaded triangle L by scale factor 2.5, centre O.

(Total for question 7 is 2 marks)

Q8.

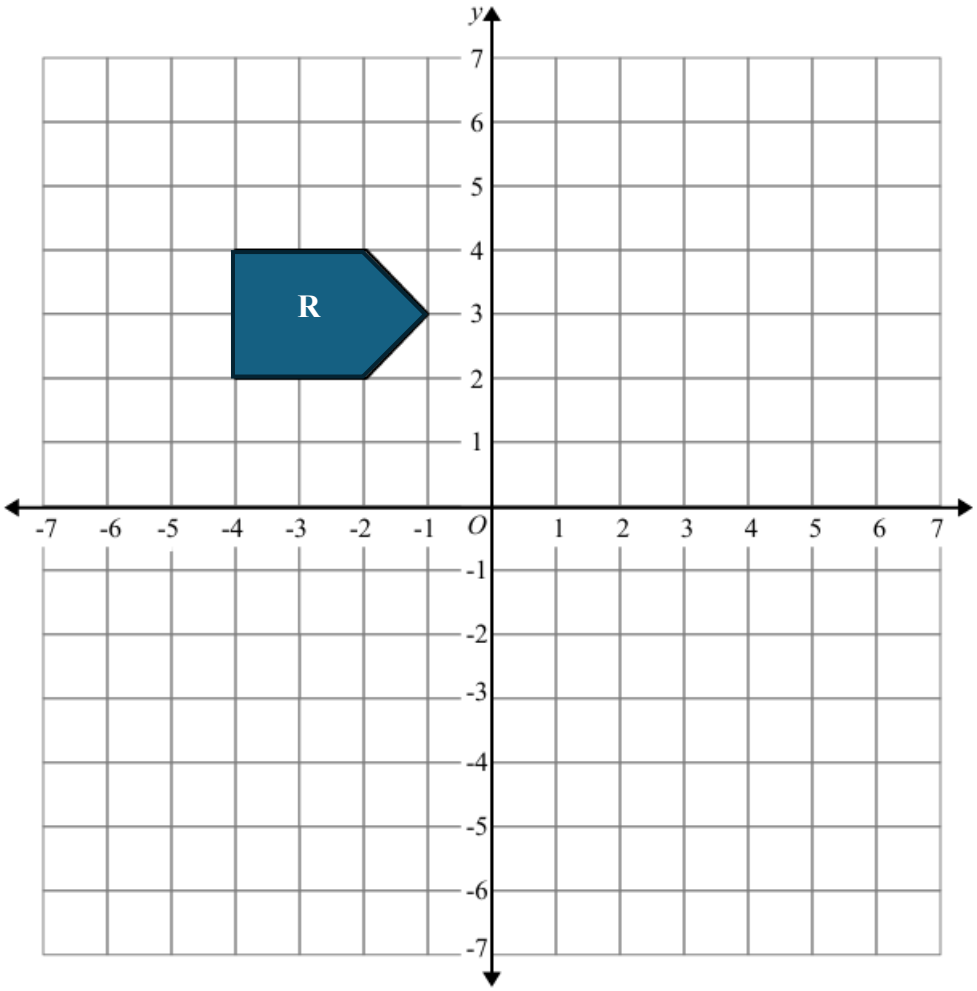


Shape M is transformed to shape N by a reflection in the x axis followed by a translation $\begin{pmatrix} p \\ q \end{pmatrix}$

Find the value of p and the value of q.

(Total for question 8 is 3 marks)

Q9.



(a) Reflect shape R in the line x = 1.

Label the new shape S.

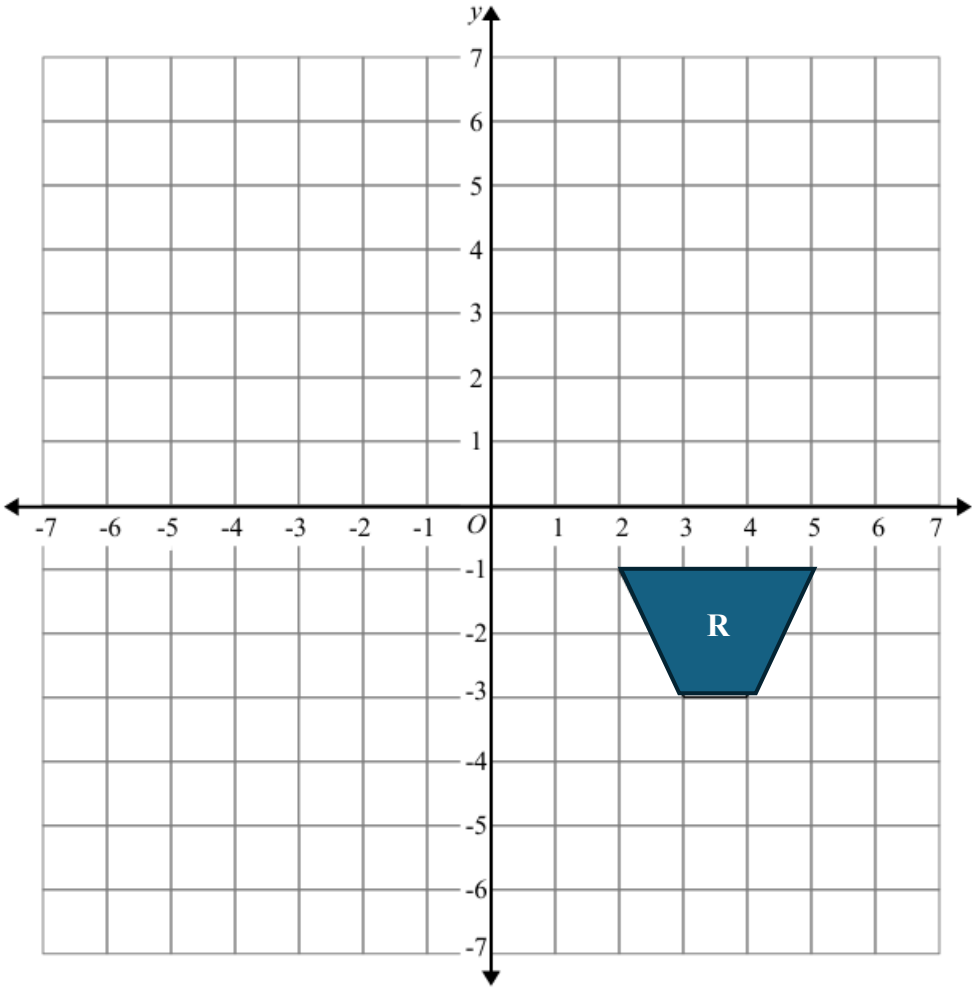
(b) Translate shape R by the vector $\begin{pmatrix} 5 \\ -6 \end{pmatrix}$ Label the new shape T

(c) Rotate shape R by 90° anticlockwise, centre O

Label the new shape U

(Total for question 9 is 3 marks)

Q10.



(a) Rotate trapezium R 180° about the origin.

Label the new trapezium T.

(b) Translate trapezium R by the vector $\begin{pmatrix} -1 \\ -3 \end{pmatrix}$

Label the new trapezium U.

(Total for question 10 is 2 marks)