

Edexcel GCSE

Mathematics (Linear) – 1MA0

TRANSLATION

SOLUTIONS

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.

Tracing paper may be used.

Items included with question papers

Nil

**Instructions**

Use black ink or ball-point pen.

Fill in the boxes at the top of this page with your name, centre number and candidate number.

Answer all questions.

Answer the questions in the spaces provided – there may be more space than you need.

Calculators may be used.

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.

Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

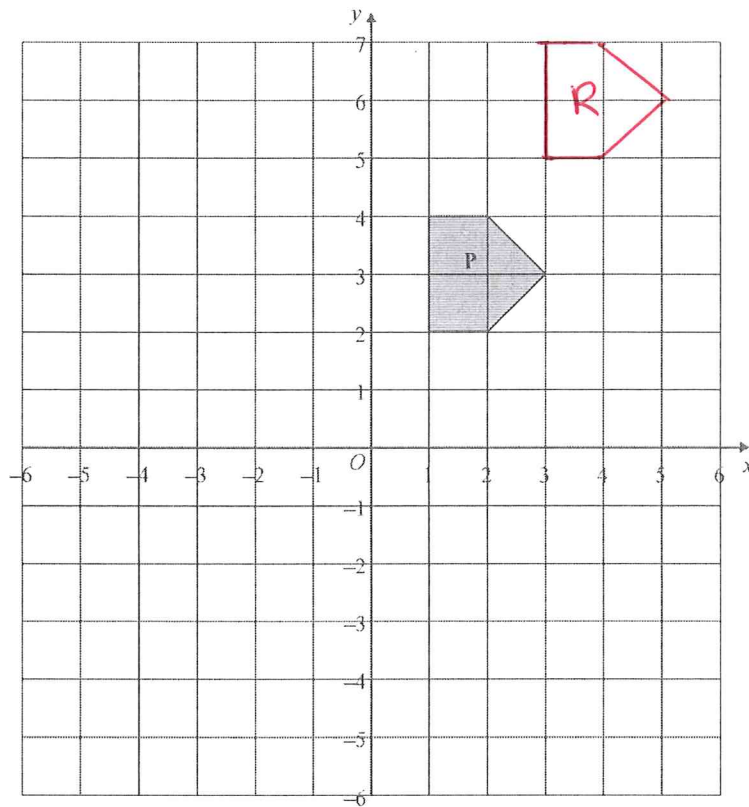
Read each question carefully before you start to answer it.

Keep an eye on the time.

Try to answer every question.

Check your answers if you have time at the end.

1.

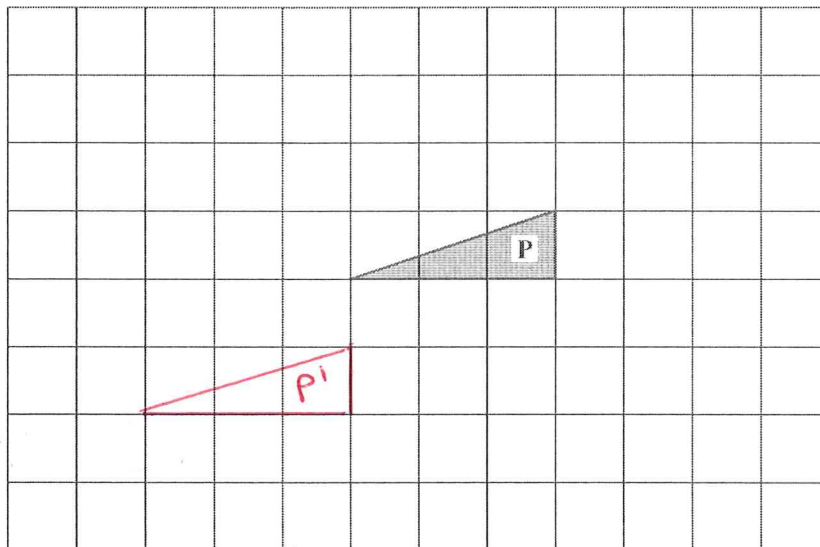


On the grid, translate the shaded shape **P** by 2 units to the right and 3 units up.

Label the new shape **R**.

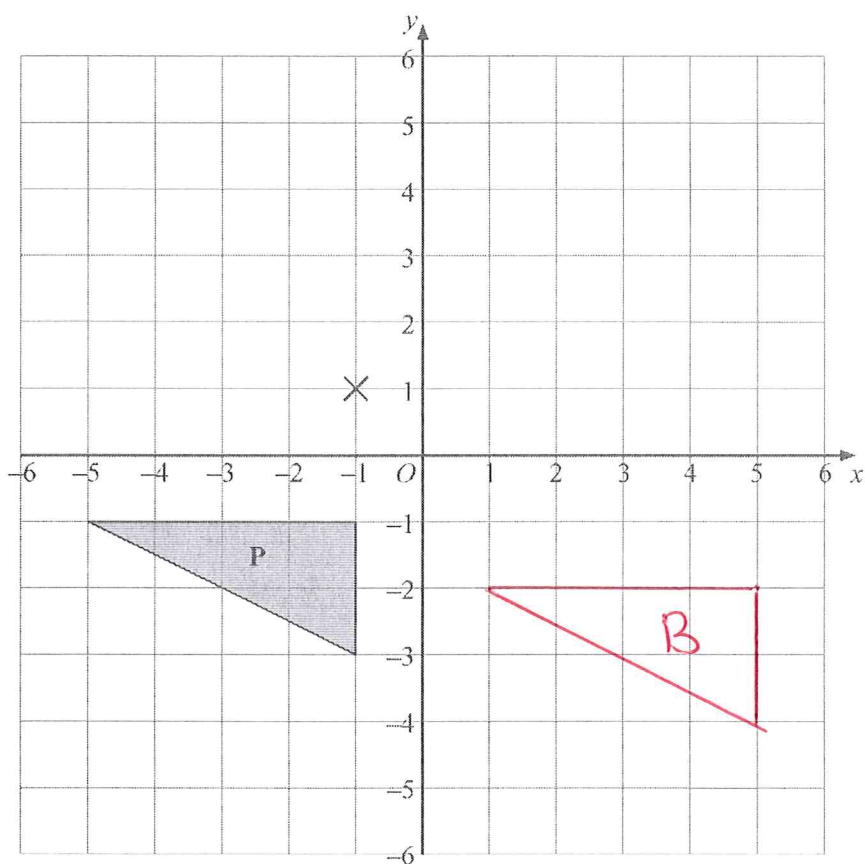
(Total 2 marks)

2. Translate shape **P** 3 squares to the left and 2 squares down.



(Total 1 mark)

3.

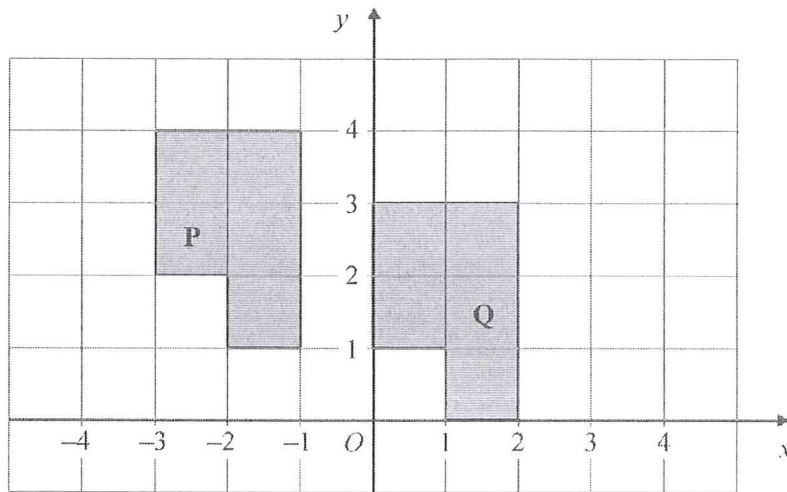


Translate triangle **P** by the vector $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$.

Label the new triangle **B**.

(2)
(Total 2 marks)

4.

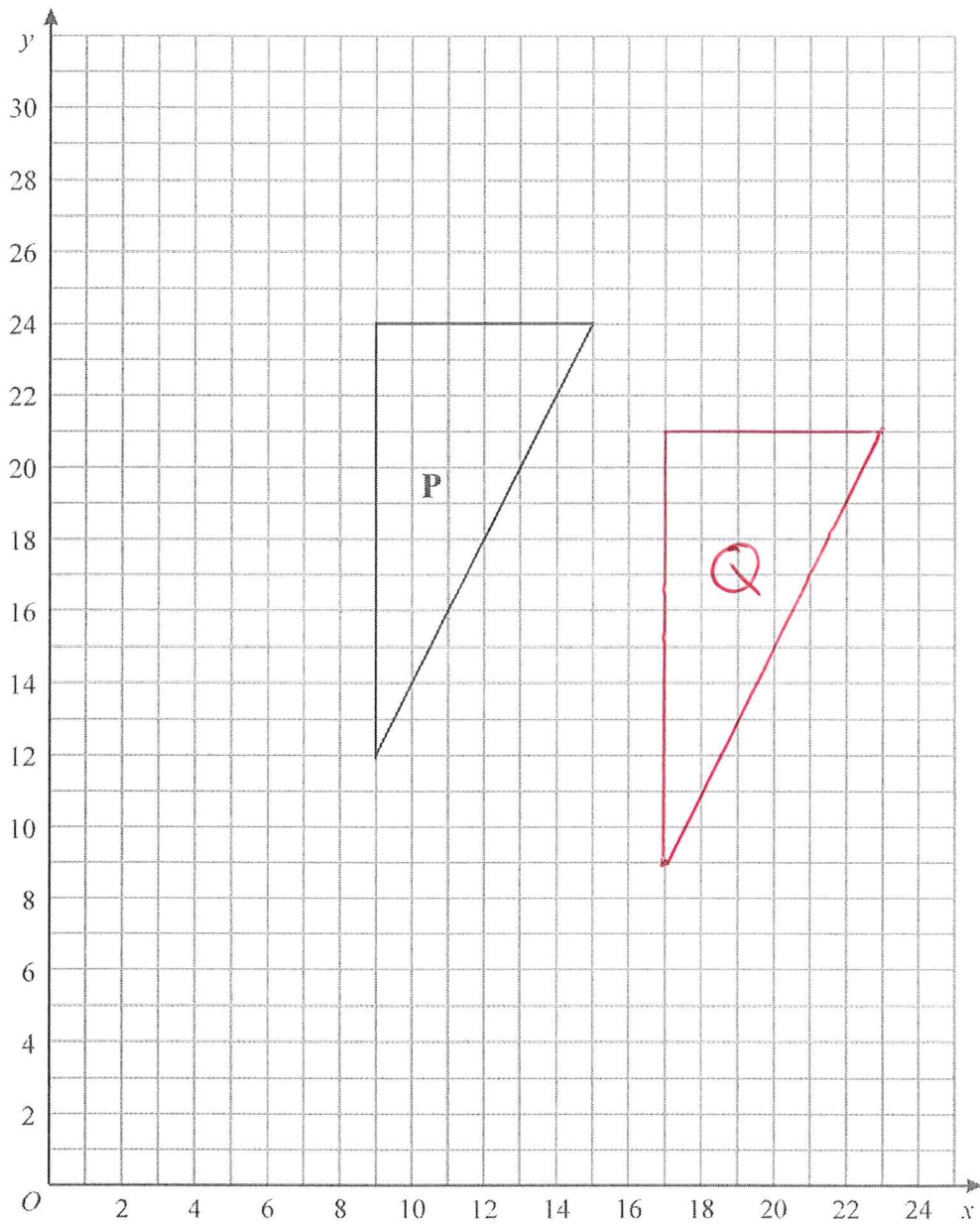


Describe fully the single transformation that will map shape P onto shape Q.

Translation through the vector
 $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$

(2)
(Total 2 marks)

5.

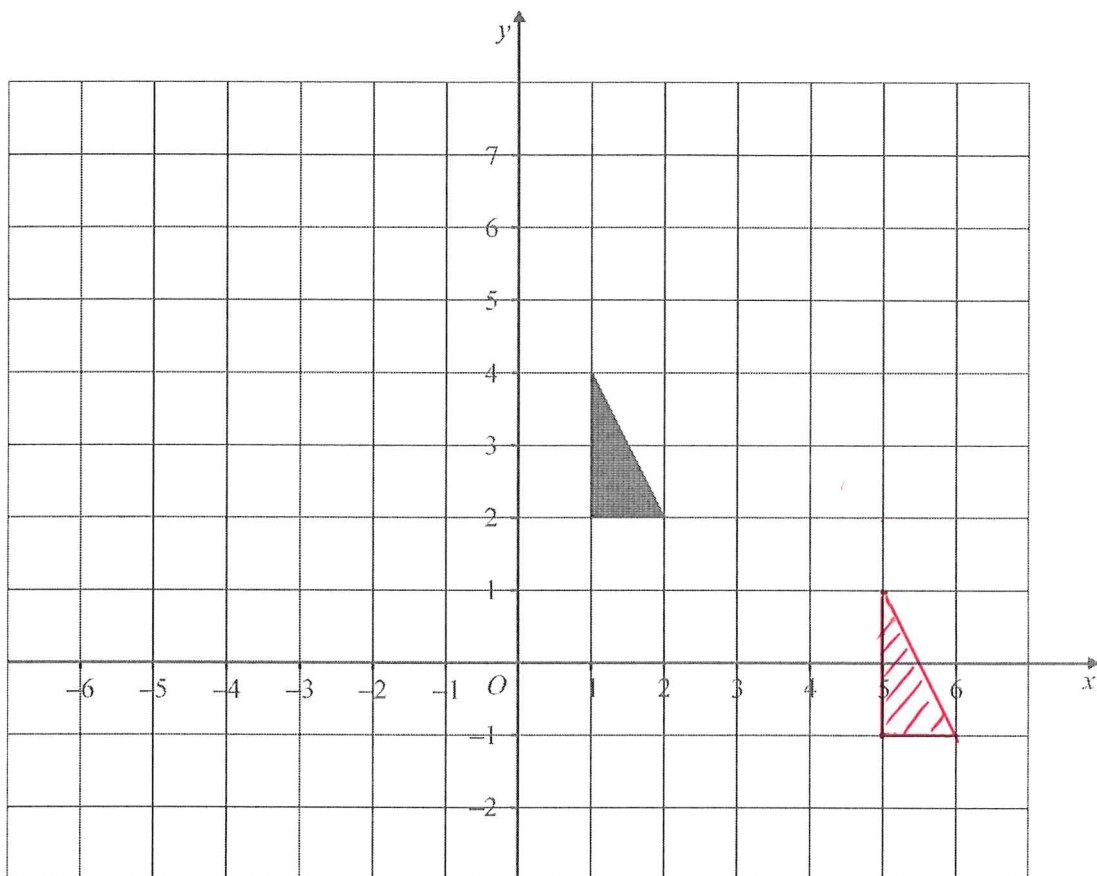


On the grid, translate triangle **P** by the vector $\begin{pmatrix} 8 \\ -3 \end{pmatrix}$

Label the new triangle **Q**.

(2)
(Total 2 marks)

6.

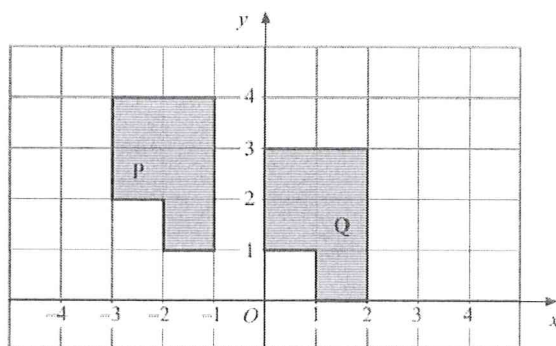


Translate the triangle by the vector

$$\begin{pmatrix} 4 \\ -3 \end{pmatrix}$$

(Total 2 mark)

7.



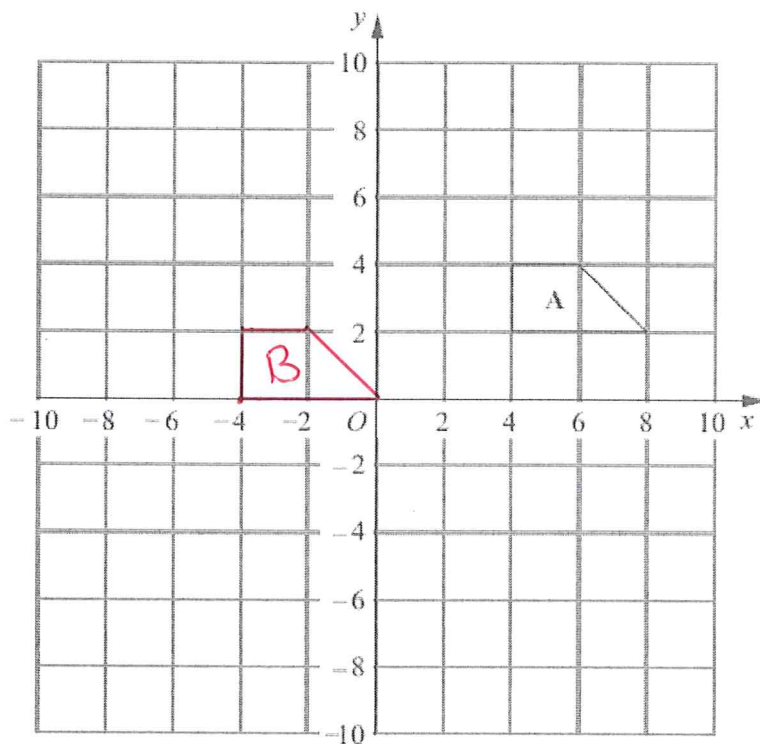
Describe fully the single transformation that will map shape **P** onto shape **Q**.

Translation through $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$

(2)

(Total 2 marks)

8.

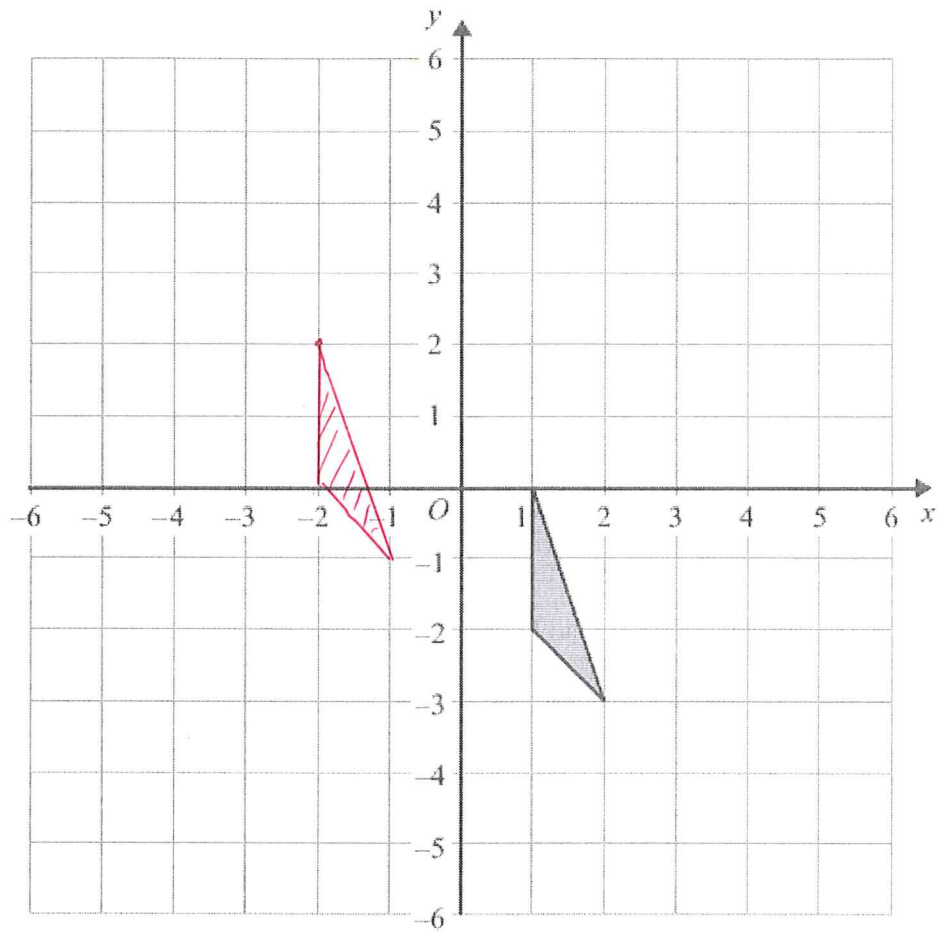


Translate shape **A** by $\begin{pmatrix} -8 \\ -2 \end{pmatrix}$.

Label the new shape **B**.

(Total 2 marks)

9.



Translate the triangle by $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$

(Total 2 marks)
