

6 Triangles A and B are shown on the grid opposite.

- (a) Describe fully the **single** transformation that maps triangle A onto triangle B

Triangle A is transformed to triangle C under the translation $\begin{pmatrix} -1 \\ -8 \end{pmatrix}$

- (b) On the grid, draw and label triangle C

Triangle A is transformed to triangle D under the transformation with the matrix \mathbf{M} where

$$\mathbf{M} = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$$

- (c) On the grid, draw and label triangle D

Triangle B is transformed to triangle E by a rotation of 180° about the point $(0, 1)$

- (d) On the grid, draw and label triangle E

- (e) Find the matrix which represents the transformation that maps triangle A onto triangle E



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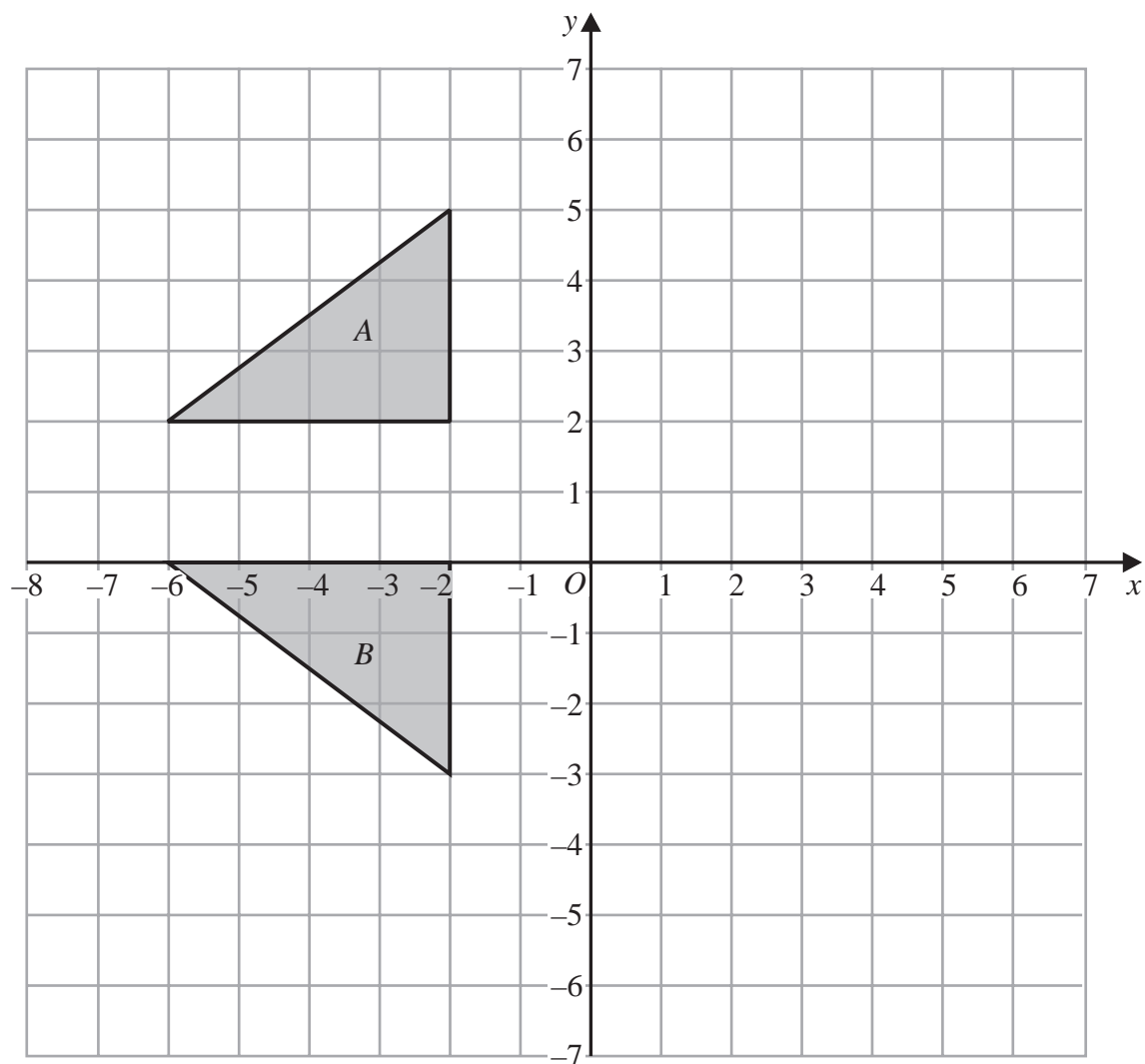
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Question 6 continued



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Turn over for a spare grid if you need to redraw your triangles.



P 7 2 9 1 9 A 0 1 7 4 0

Question 6 continued

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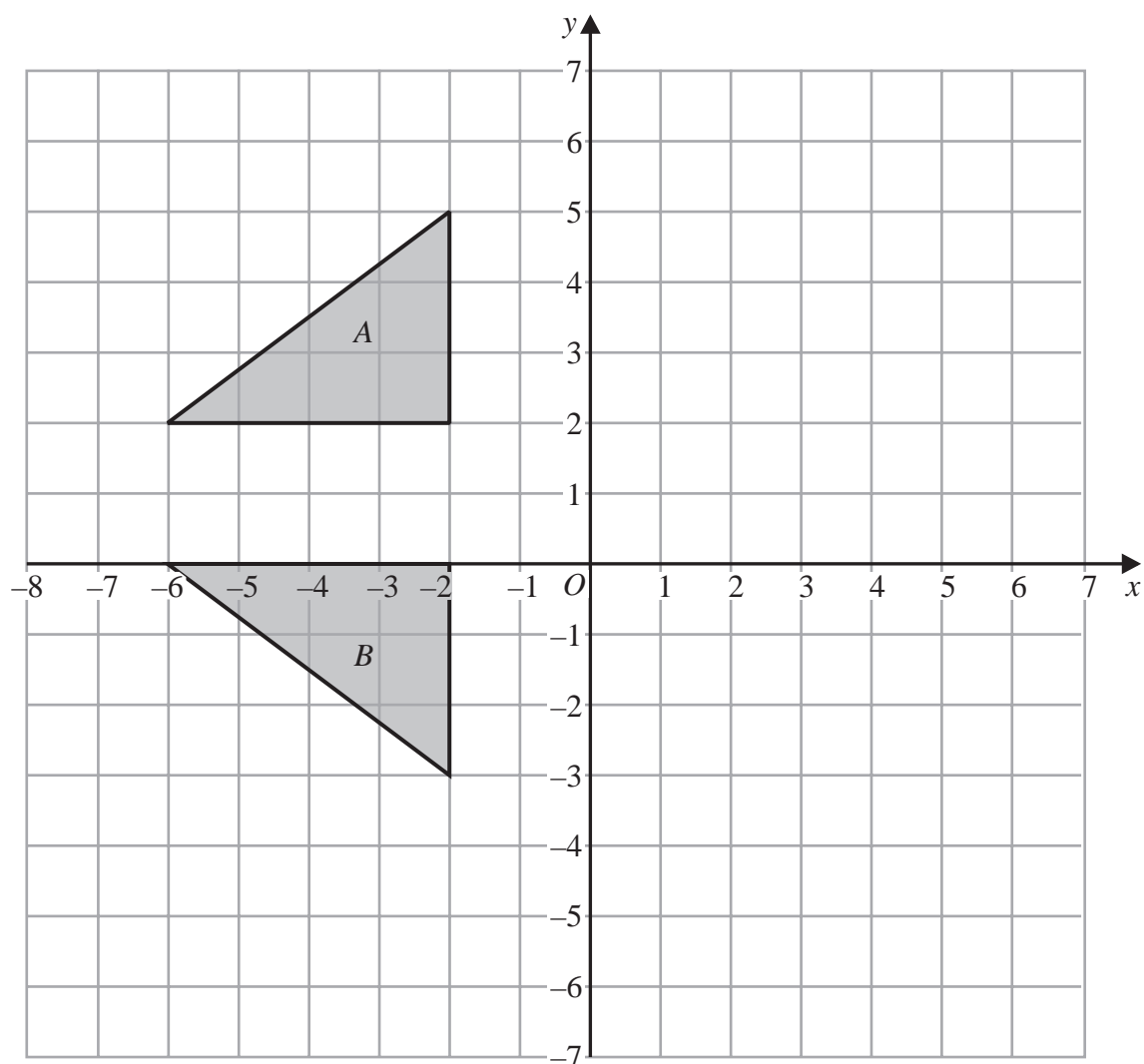
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Question 6 continued

Only use this grid if you need to redraw your triangles.



(Total for Question 6 is 11 marks)

