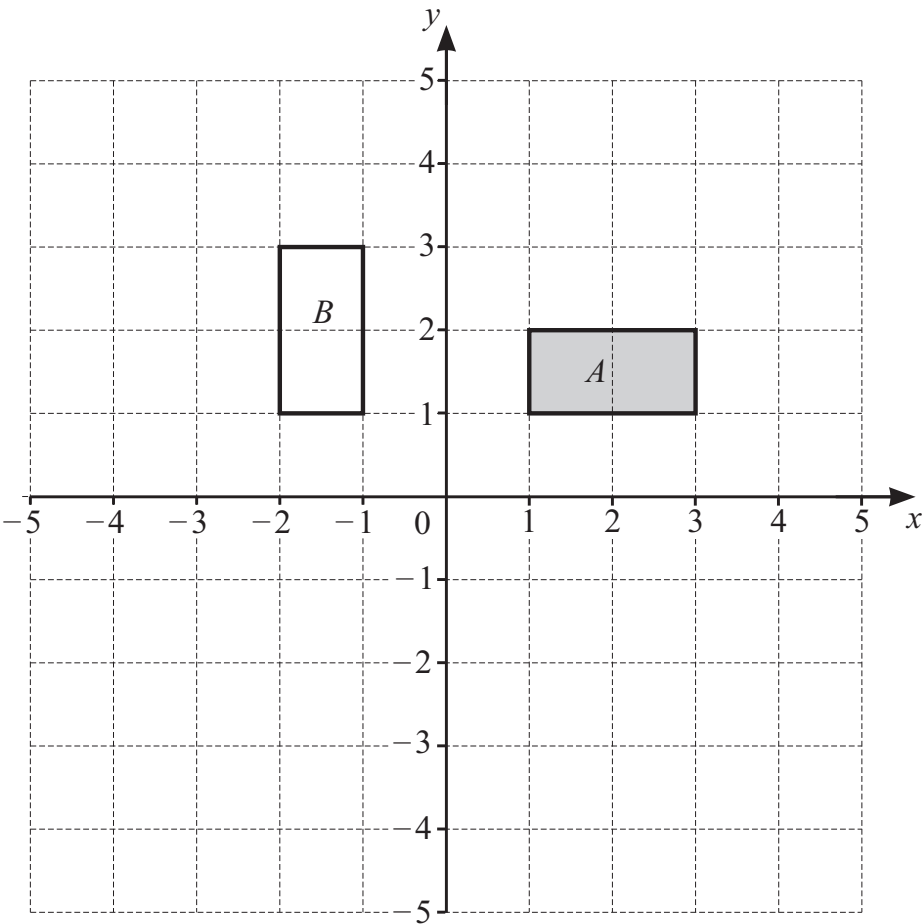


21 Shapes *A* and *B* are shown on the grid.



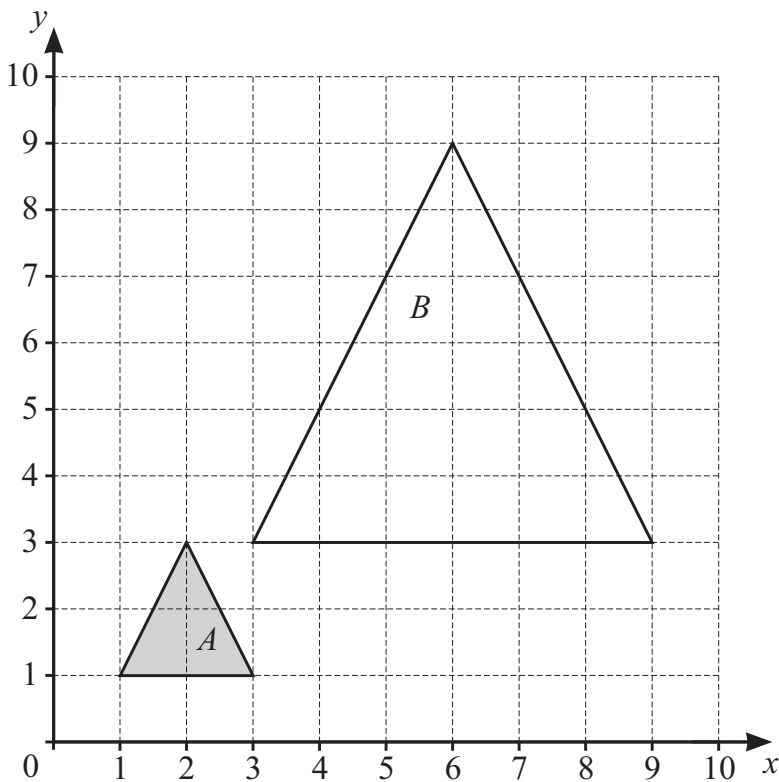
- (a) Describe fully the **single** transformation that maps shape *A* onto shape *B*.

.....

..... [3]
- (b) Draw the image of shape *A* after a reflection in the line $y = -1$.

[2]

22 The diagram shows triangles *A* and *B*.



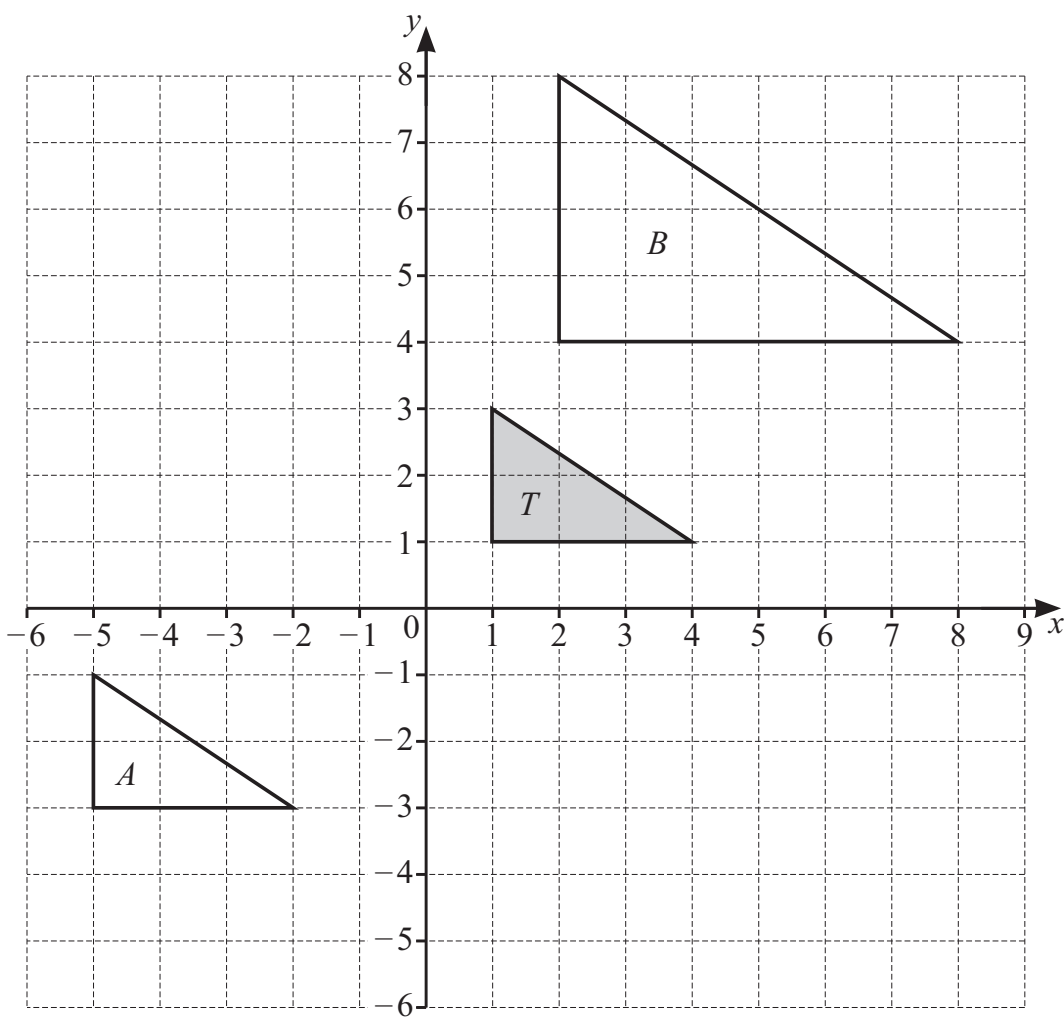
Describe fully the **single** transformation that maps triangle *A* onto triangle *B*.

.....

..... [3]

2 Find the largest **odd** number that is a common factor of 90 and 120.

..... [1]



- (a) On the grid, draw the image of triangle *T* after a rotation, 90° clockwise, centre (0, 0).

[2]
- (b) Describe fully the **single** transformation that maps triangle *T* onto triangle *A*.

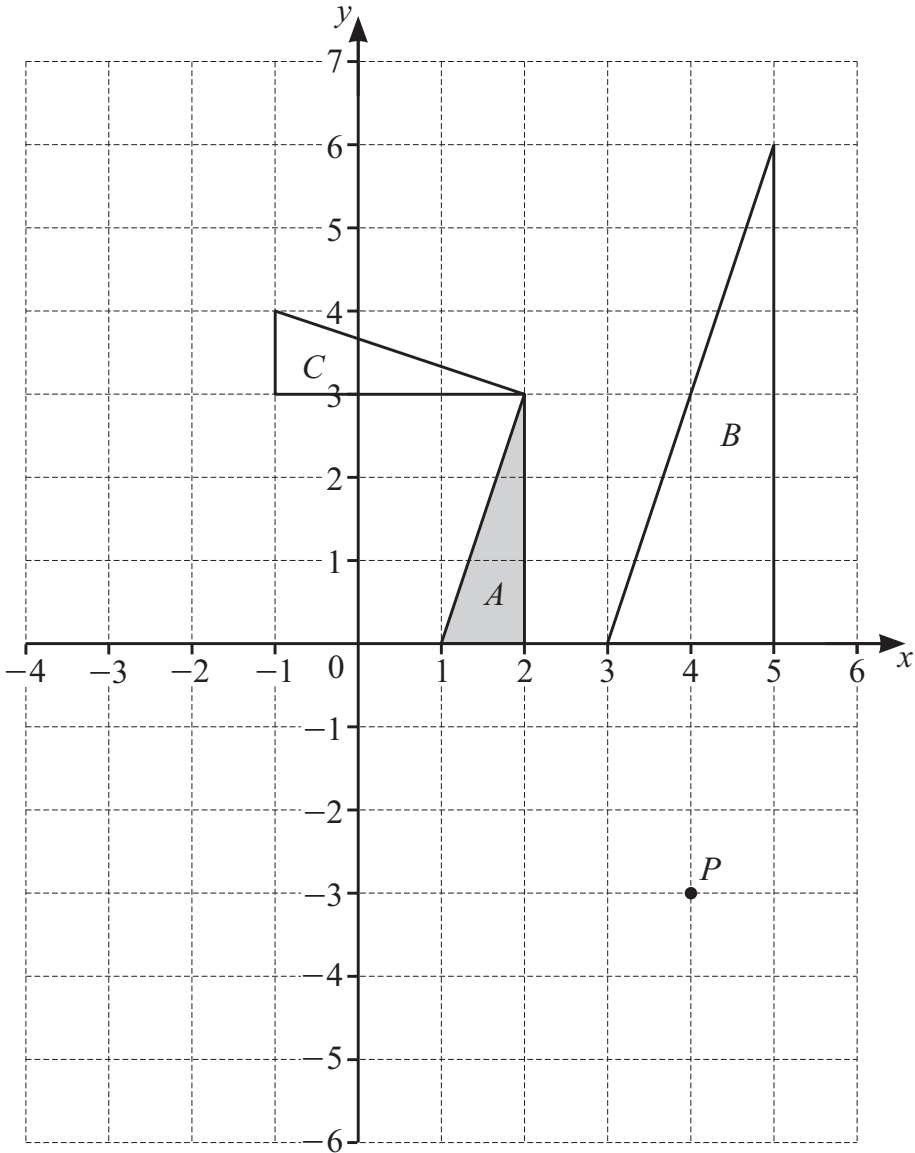
.....

..... [2]
- (c) Describe fully the **single** transformation that maps triangle *T* onto triangle *B*.

.....

..... [3]

16 The diagram shows a point P and three triangles, A , B and C , on a 1 cm^2 grid.



(a) Find the area of triangle B .

..... cm^2 [1]

(b) (i) Write down the coordinates of point P .

(..... ,) [1]

(ii) Work out the coordinates of point P after a translation by the vector $\begin{pmatrix} -20 \\ 12 \end{pmatrix}$.

(..... ,) [1]

(c) Draw the image of triangle A after a reflection in the line $y = -1$. [2]

(d) Describe fully the **single** transformation that maps

(i) triangle A onto triangle B

.....
..... [3]

(ii) triangle A onto triangle C .

.....
..... [3]

3 In the USA, one gallon of fuel costs \$4.83 .
In the UK, one litre of fuel costs £1.62 .

The exchange rate is £1 = \$1.215 .
1 gallon = 3.785 litres

In which country does 1 litre of fuel cost more and by how much?
Give your answer in dollars.

..... by \$ [3]