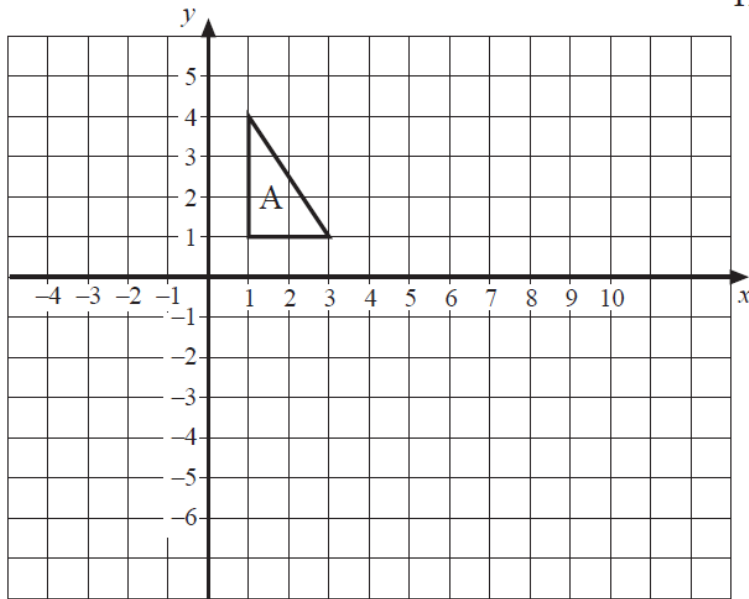


**TRANSFORMATIONS – translations, reflection and rotation**

1. Use this set of axes to answer question 1

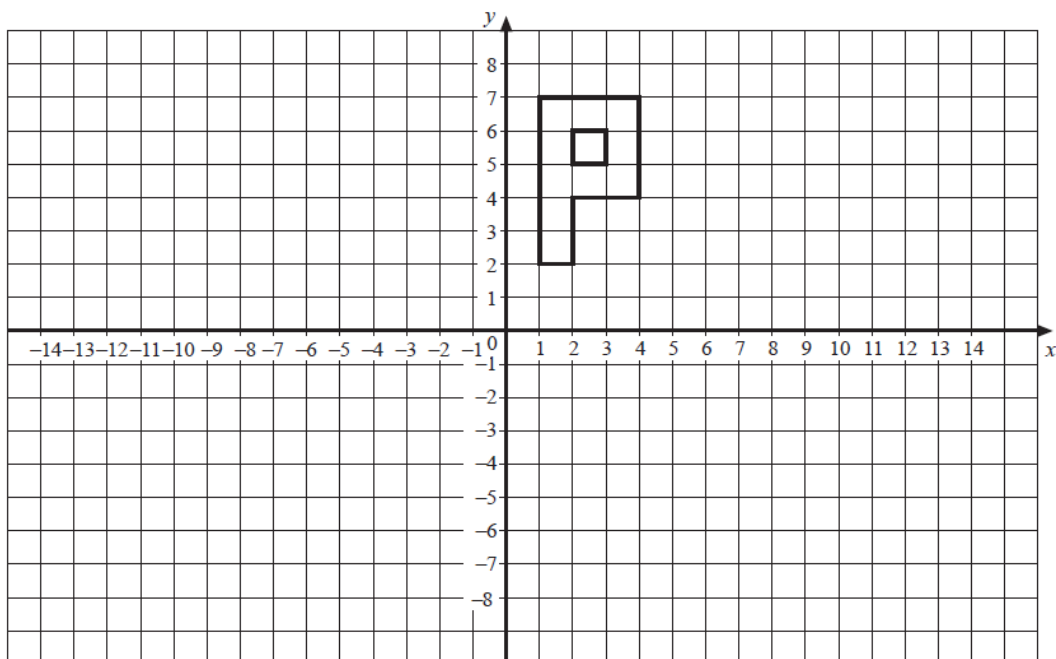


Translate triangle A by the vectors:

- (a)  $\begin{pmatrix} 7 \\ 2 \end{pmatrix}$  to obtain B,
- (b)  $\begin{pmatrix} 4 \\ -6 \end{pmatrix}$  to obtain C,
- (c)  $\begin{pmatrix} -4 \\ -1 \end{pmatrix}$  to obtain D,
- (d)  $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$  to obtain E,
- (e)  $\begin{pmatrix} 8 \\ -5 \end{pmatrix}$  to obtain F.

2.

- (a) Reflect shape P in the (i)  $y$  axis (ii)  $x$  axis (c)  $x = 7$



- (b) Rotate the shape P  $180^\circ$  using a centre of (0,0).