

TRANSFORMATIONS – PRACTICE QUESTIONS

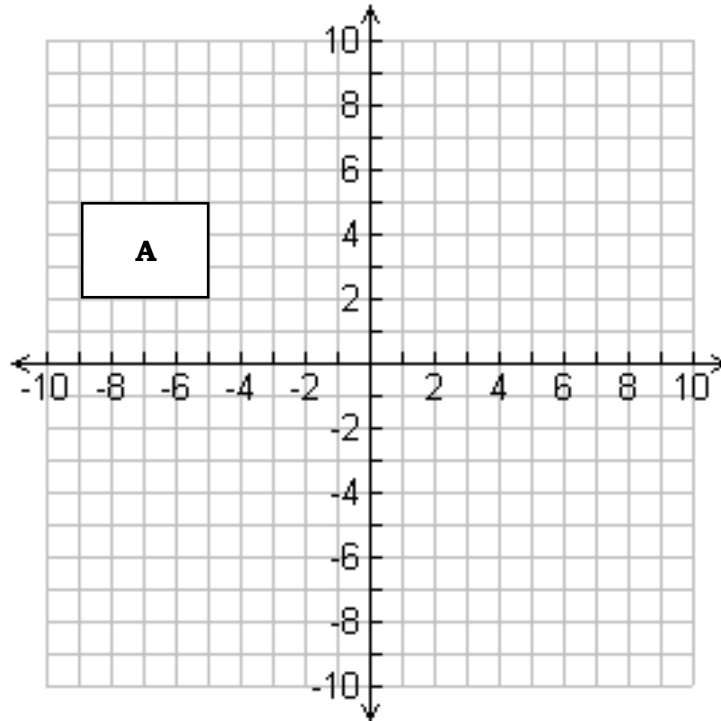


metatutor

1.

(a) Reflect Shape A in the y axis and label this Shape B.

(b) Reflect Shape A in the x axis and label this Shape C.

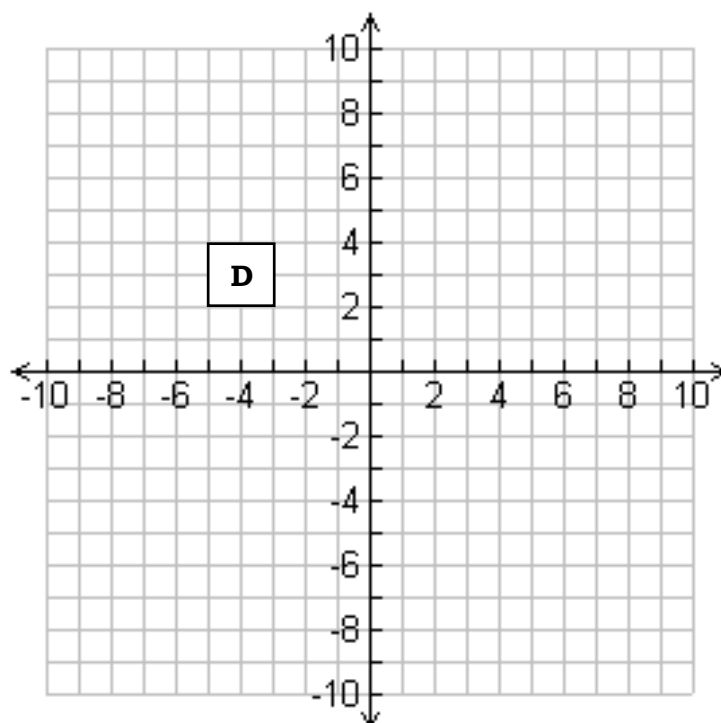


2.

(a) Rotate Shape D 90° clockwise about $(0,0)$ and label this Shape E.

(b) Rotate Shape D 90° anti-clockwise about $(-3,-2)$ and label this Shape F.

(c) Rotate Shape D 180° about $(2,-3)$ and label this Shape G.

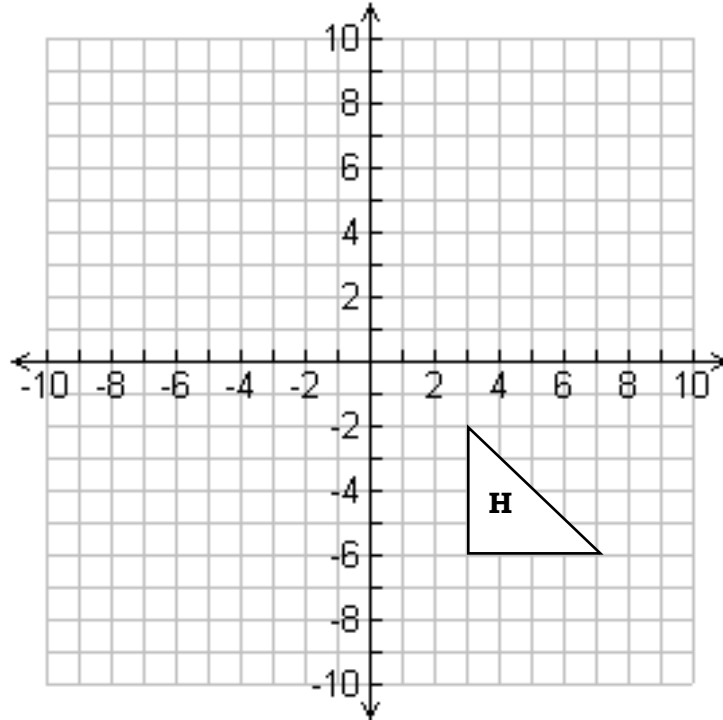


3.

(a) Translate Shape H using the vector $\begin{pmatrix} 1 \\ 8 \end{pmatrix}$ and label this Shape I.

(b) Translate Shape H using the vector $\begin{pmatrix} -9 \\ 7 \end{pmatrix}$ and label this Shape J.

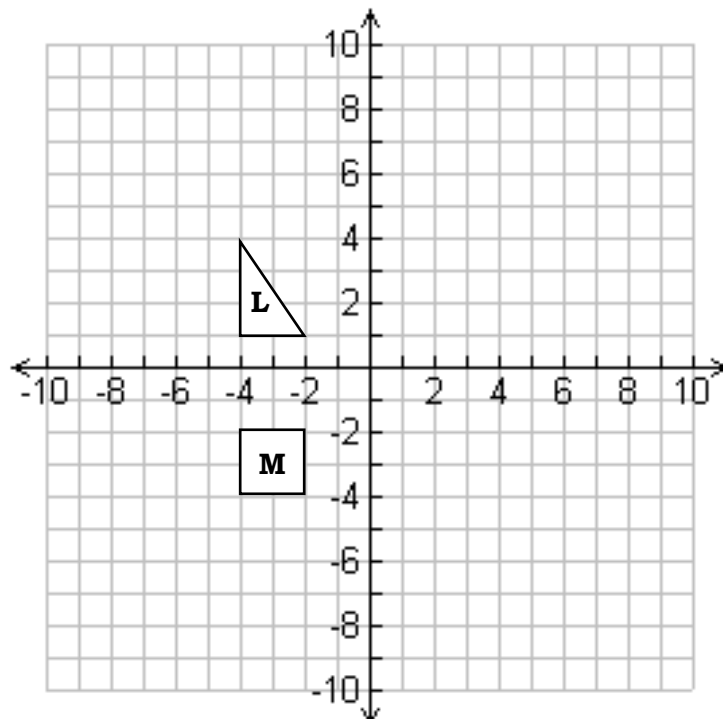
(c) Translate Shape H using the vector $\begin{pmatrix} -8 \\ -2 \end{pmatrix}$ and label this Shape K.



4.

(a) Enlarge Shape L with scale factor 2 using $(-6, 0)$ as the centre of enlargement and label this Shape N.

(b) Enlarge Shape M with scale factor 3 using $(-7, -1)$ as the centre of enlargement and label this Shape O.

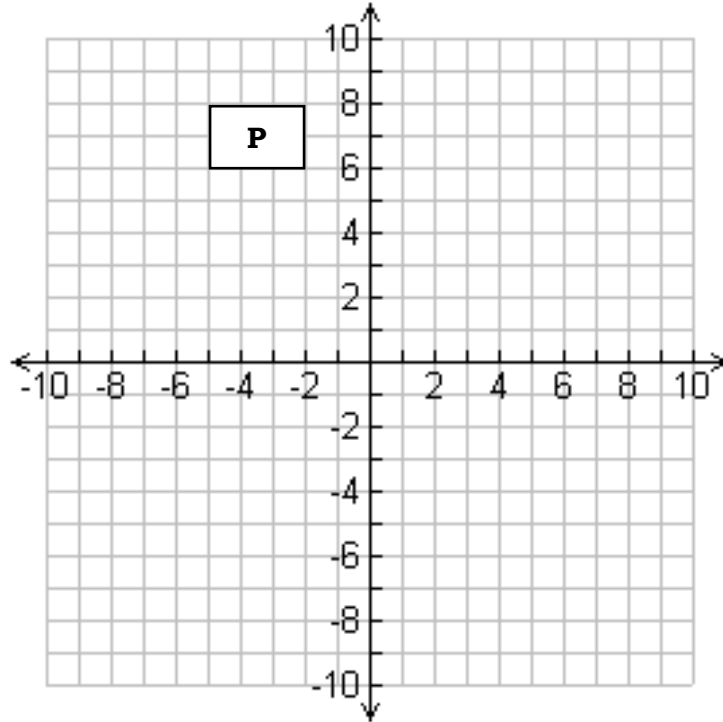


5.

(a) Rotate Shape P 90° clockwise about $(0,5)$ and label this Shape Q.

(b) Then reflect Shape Q in the line $y = 1$ and label this Shape R.

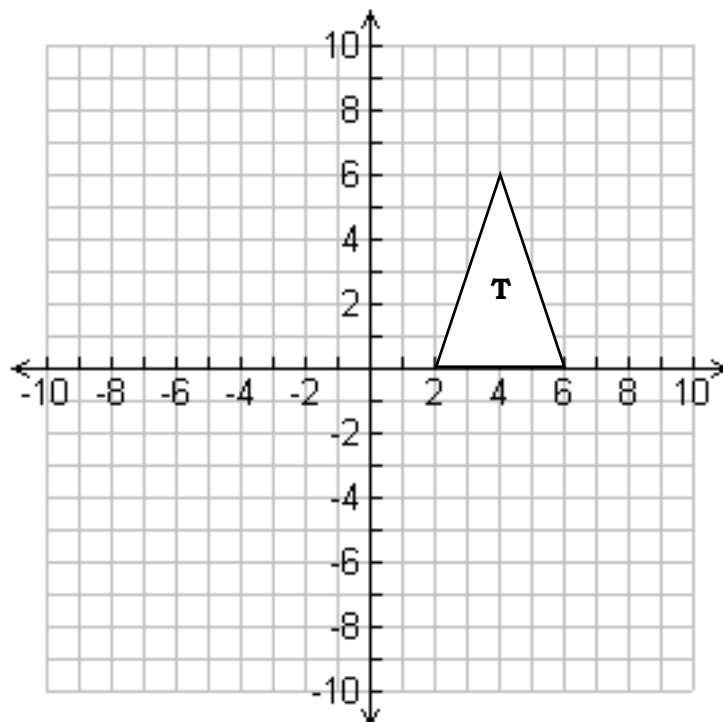
(c) Then translate Shape R using the vector $\begin{pmatrix} 5 \\ -1 \end{pmatrix}$ and label this Shape S.



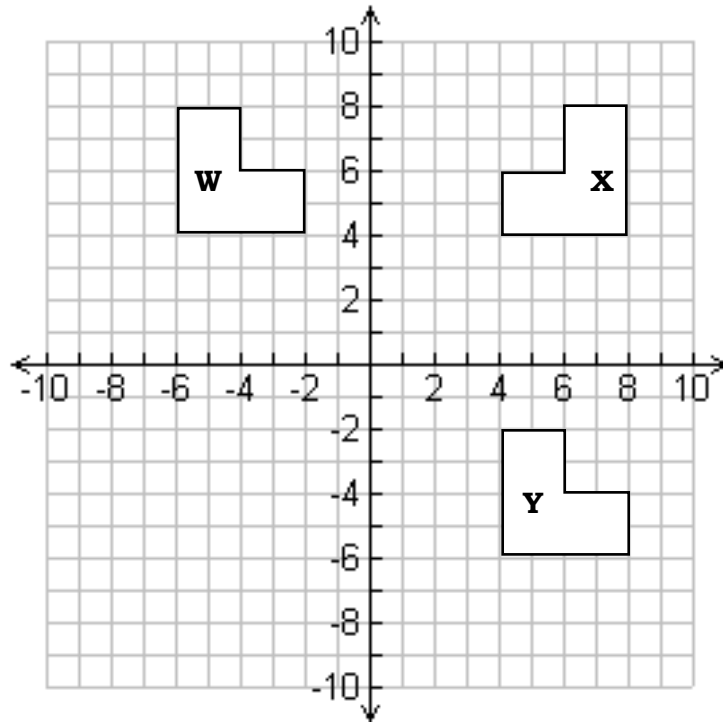
6.

(a) Enlarge Shape T with scale factor 0.5 using $(-8,8)$ as the centre of enlargement and label this Shape U.

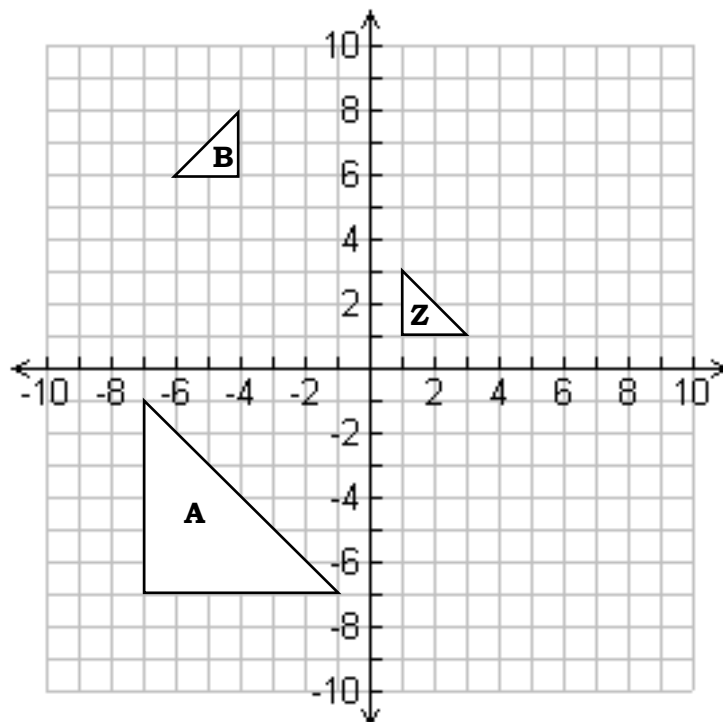
(b) Then rotate Shape U 180° about $(1,-1)$ and label this Shape V.



- 7.
- (a) Describe fully the single transformation that transforms Shape W into Shape X.
- (b) Describe fully the single transformation that transforms Shape X into Shape Y.
- (c) Describe fully the single transformation that transforms Shape Y into Shape W.



- 8.
- (a) Describe fully the single transformation that transforms Shape Z into Shape A.
- (b) Describe fully the single transformation that transforms Shape Z into Shape B.

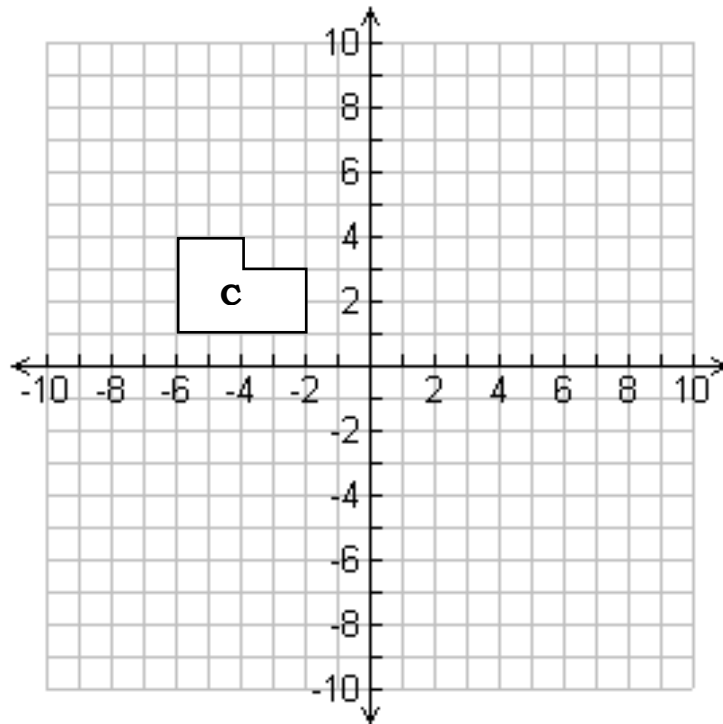


9.

(a) Reflect Shape C in the line $y = -2$ and label this Shape D.

(b) Then translate Shape D using the vector $\begin{pmatrix} 8 \\ 2 \end{pmatrix}$ and label this Shape E.

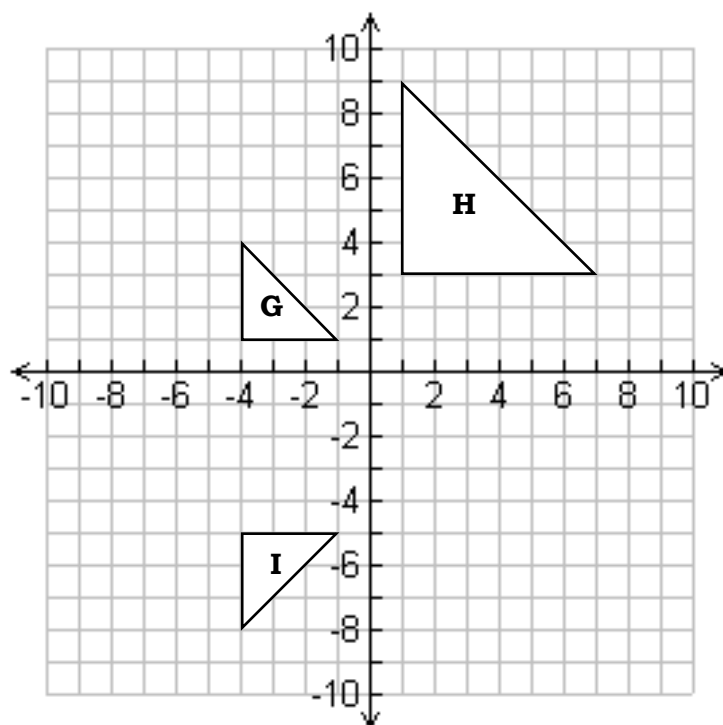
(c) Then rotate Shape E 180° about $(4,0)$ and label this Shape F.



10.

(a) Describe fully the single transformation that transforms Shape G into Shape H.

(b) Describe fully the single transformation that transforms Shape G into Shape I.

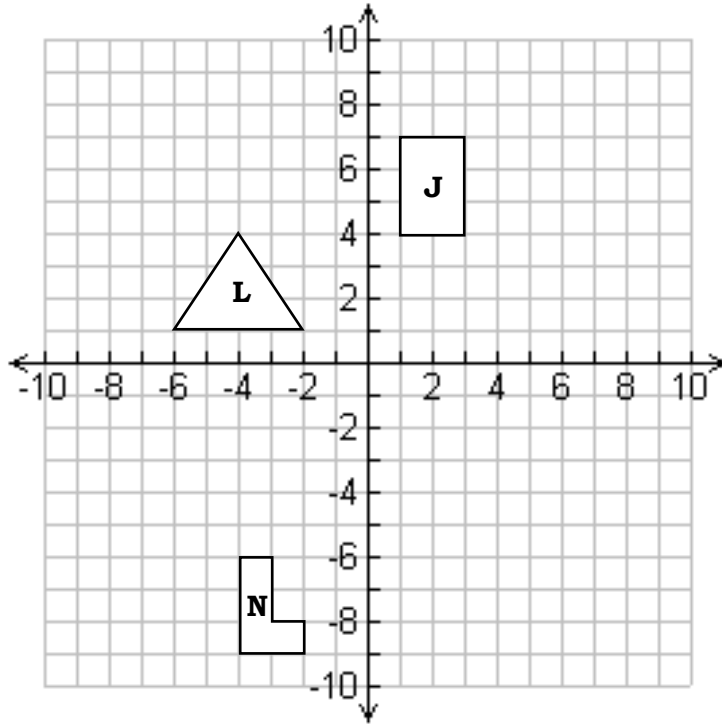


11.

(a) Reflect Shape J in the line $y = x$ and label this Shape K.

(b) Reflect Shape L in the line $y = x$ and label this Shape M.

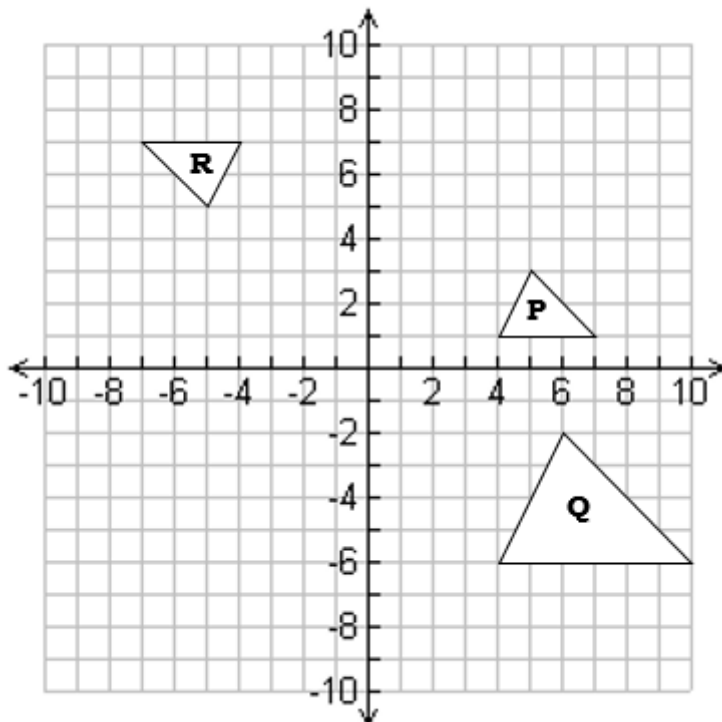
(c) Reflect Shape N in the line $y = x$ and label this Shape O.



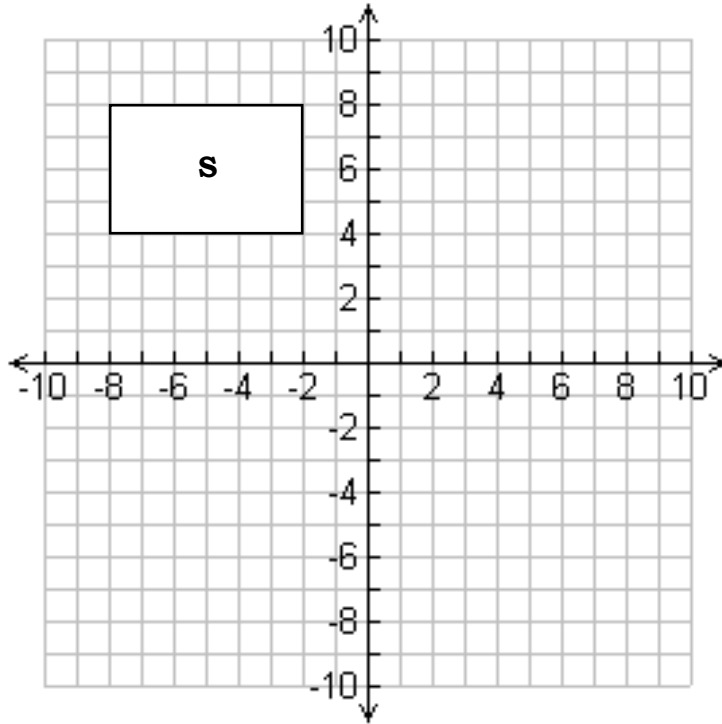
12.

(a) Describe fully the single transformation that transforms Shape P into Shape Q.

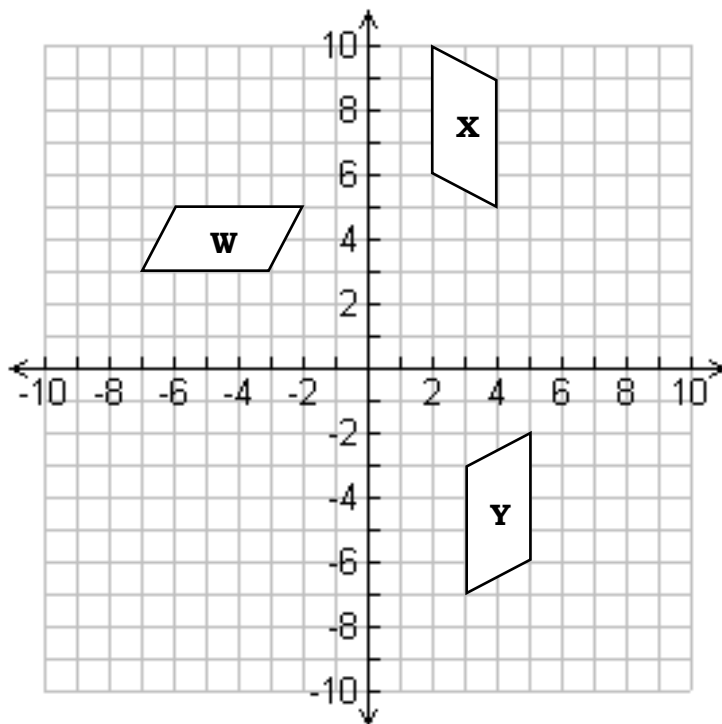
(b) Describe fully the single transformation that transforms Shape P into Shape R.



- 13.
- (a) Reflect Shape S in the line $y = x$ and label this Shape T.
- (b) Then enlarge Shape T with scale factor 0.5 using $(4, 8)$ as the centre of enlargement and label this Shape U.
- (c) Then rotate Shape U 180° about $(-1, -1)$ and label this Shape V.



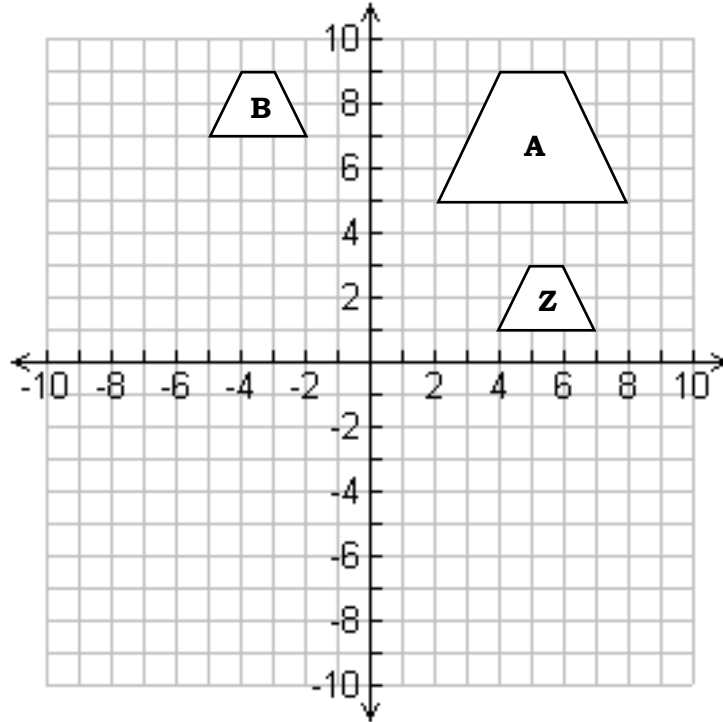
- 14.
- (a) Describe fully the single transformation that transforms Shape W into Shape X.
- (b) Describe fully the single transformation that transforms Shape W into Shape Y.



15.

(a) Describe fully the single transformation that maps Shape Z into Shape A.

(b) Describe fully the single transformation that maps Shape Z into Shape B.



16.

(a) Reflect Shape Q in the line $y = -x$ and label this Shape P.

(b) Describe fully the single transformation that transforms Shape P into Shape R.

