

QQQ – Year 7 Transformations

Name _____

Score _____ / 9

Award _____

1. Using the diagram below, describe the single transformation from.

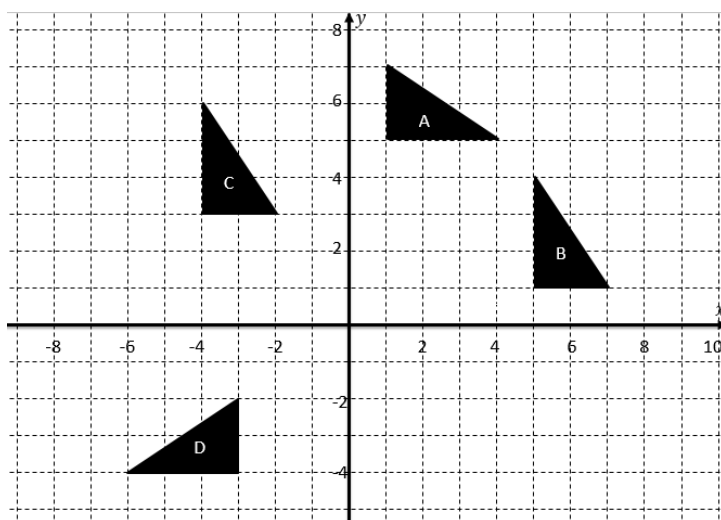
a) A to B _____ (1)

b) B to C _____ (1)

c) C to D _____ (1)

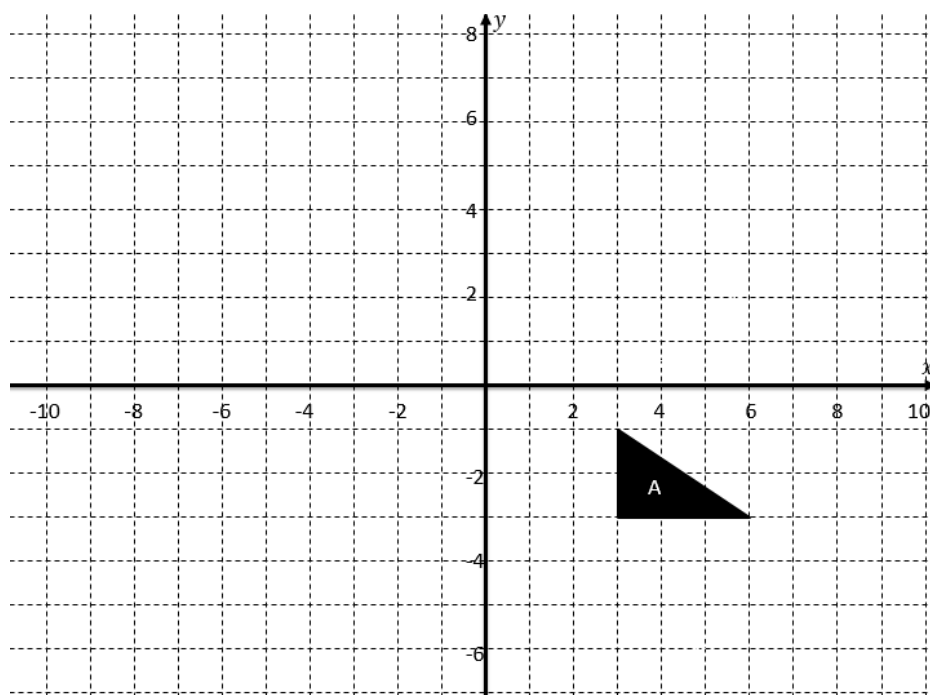
d) A to D (note that decimal coordinates are permitted)

_____ (1)

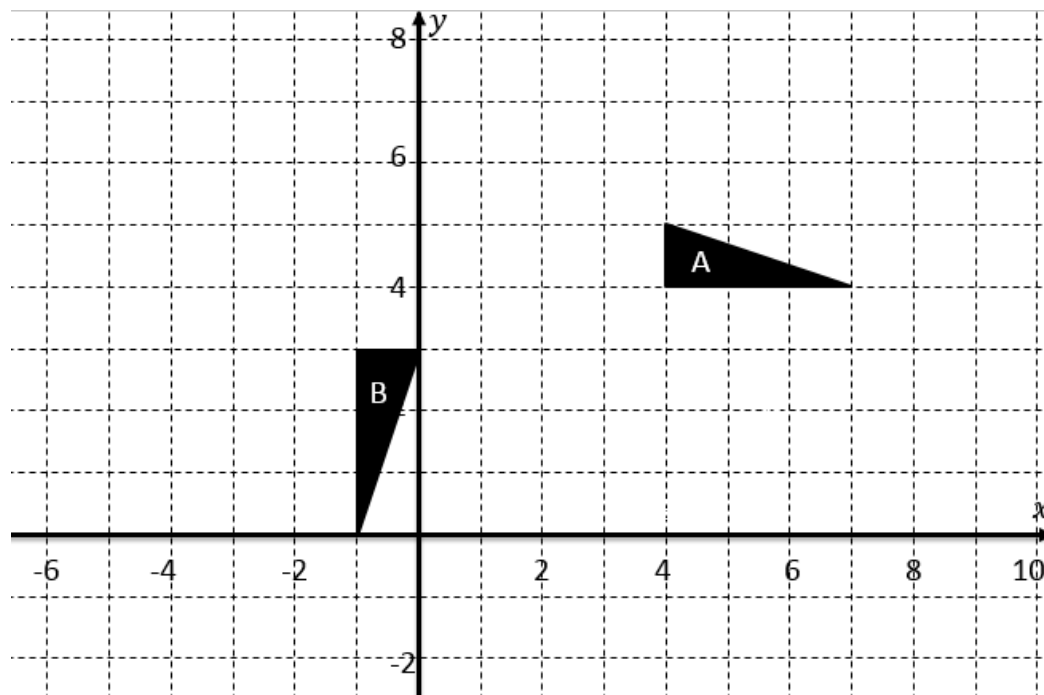



2. Carry out the following transformations:

- Rotate the shape A 180° about the point $(0, -2)$. Label it B. (1)
- Rotate the shape A 90° anticlockwise about the origin. Label it C. (1)
- Reflect the shape in the line $y = 2$. Label it D. (1)



3. Identify the centre of rotation as A is rotated to give B. (1)



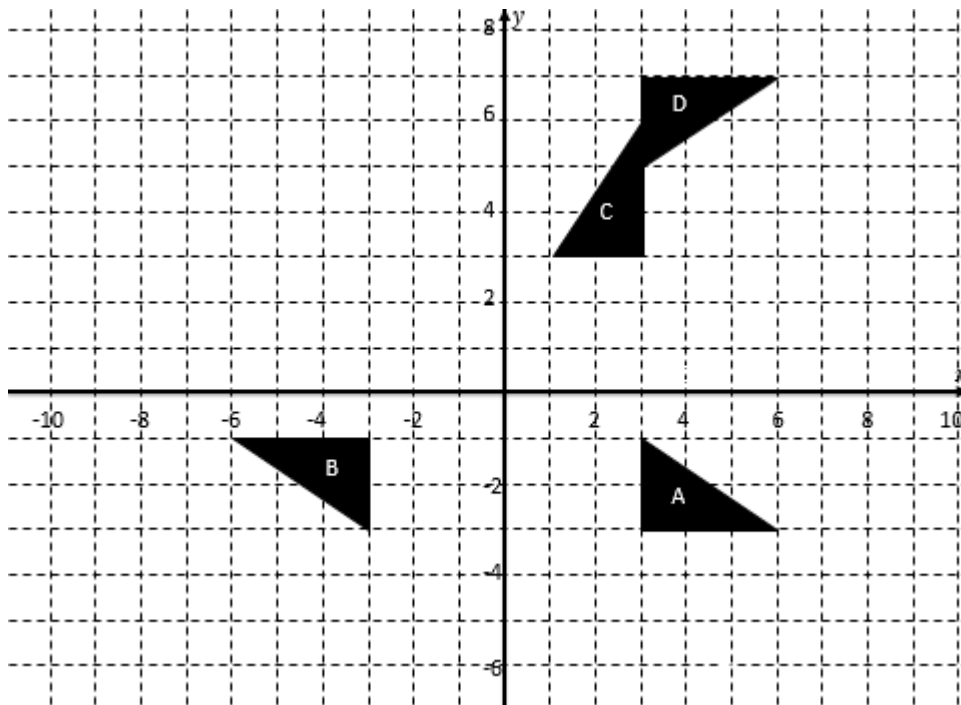
Centre of rotation: (,) 

4. An object is rotated 180° about the point (3,3) followed by 180° about the point (1,1). Describe the **single** transformation that has the same effect as this combined transformation. (1)

(Awards: 5+ Bronze, 6+ Silver, 8+ Gold, 9 Platinum)

Solutions

1. A) Reflection in the line $y = x$
B) A translation by $\begin{pmatrix} -9 \\ 2 \end{pmatrix}$
C) A rotation 90° anticlockwise about/around the origin (or $(0,0)$).
- 2.



3. $(1,6)$
4. Translation by $\begin{pmatrix} -4 \\ -4 \end{pmatrix}$.