FORM 2
CHAPTER 11

Summative Practice

Section A

1 Answer: **B**

2 $K+\begin{pmatrix}-1\\3\end{pmatrix}=\begin{pmatrix}5\\4\end{pmatrix}$

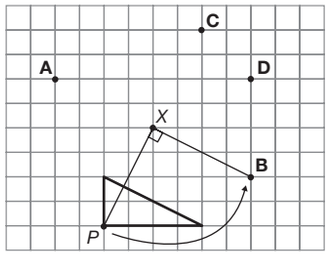
$K=\begin{pmatrix}5\\4\end{pmatrix}-\begin{pmatrix}-1\\3\end{pmatrix}=\begin{pmatrix}6\\1\end{pmatrix}$

Answer: **B**

3 Two objects are congruent if both have the same shape and size.
Answer: **C**

4 $P'(7, 2)$
Answer: **C**

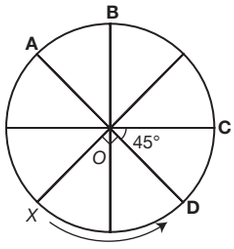
5 270° clockwise at point X = 90° anticlockwise at point X



Answer: **B**

6 Answer: **D**

7 $\frac{360°}{8}=45°$



Answer: **C**

8 Triangle **C** because the shape and size is the same as the object.
Answer: **C**

9 180° – 90° – 55° = 35°
Answer: **B**

10 Orientation of the object and the image is the same → N moves 9 units to the left and 6 units downwards to form image M.
Answer: **B**

Section B

1 (a) (i) False (ii) True (iii) True
(b) The transformation involved is a rotation at point P.
Image M is rotated clockwise.
The angle of rotation is 135°.

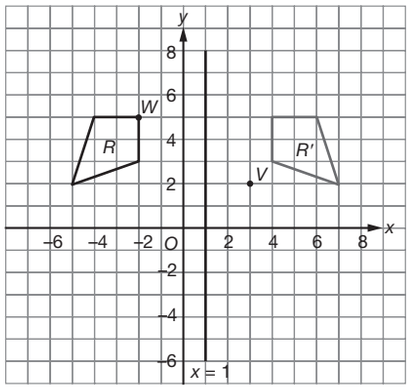
2 (a) (i) The coordinates of object (–2, 3) lies in the second quadrant.
Therefore, the reflection in the x-axis produces an image at the third quadrant. The coordinates of image is (–2, –3).
(ii) The object moves 3 units to the right and 4 units downwards.
Therefore, the coordinates of image is (–2 + 3, 3 + (–4)) = (1, –1).

(b) Isometry is an transformation that maintains the shape and size.

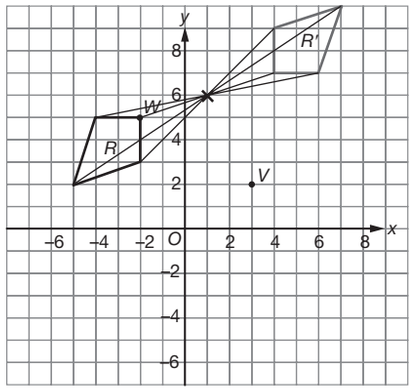
Section C

1 (a) (i) Point W moves 5 units to the right and 3 units downwards.
Thus, translation = $\begin{pmatrix}5\\-3\end{pmatrix}$

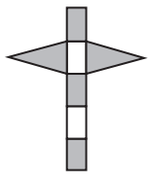
(ii)



(iii)



(b)

Object	Does it have rotational symmetry?	Order of rotational symmetry
(i) 	None	0
(ii) 	Yes	2

(c) (i) Axis of symmetry = 4 ;
Number of sides = 4;
Therefore, the order of rotational symmetry = 4

(ii)