

# G154 Transformations I

- ① a) correct enlargement  
b) reflection in the y-axis
- ②  $c = -6$   
 $d = -1$
- ③ a) correct enlargement  
b) correct rotation from centre defined
- ④ correct enlargement from centre defined
- ⑤  $1.5 \text{ cm}^2$
- ⑥ a) correct reflection  
b) correct enlargement
- ⑦ a) correct reflection  
b) enlargement, scale factor 2, centre P
- ⑧ rotation,  $180^\circ$ , about  $(2,1)$
- ⑨ a) correct reflection  
b) rotation,  $90^\circ$  anticlockwise /  $270^\circ$  clockwise, centre  $(0,1)$
- ⑩ a) correct reflection  
b) enlargement, scale factor 2, centre  $(6,2)$
- ⑪ a) correct reflection  
b) translation by vector  $\begin{pmatrix} -2 \\ -4 \end{pmatrix}$
- ⑫ a) correct rotation from centre defined  
b) enlargement, scale factor 3, centre  $(1,0)$
- ⑬ rotation,  $180^\circ$ , about  $(1,0)$
- ⑭ rotation,  $90^\circ$  clockwise /  $270^\circ$  anticlockwise, centre  $(-2,2)$
- ⑮ rotation,  $180^\circ$ , centre  $(-1,0)$

## Answers to questions 1-15

- 1) a) 1  
b) 1
- 2) 1
- 3) a) 1  
b) 1
- 4) 1
- 5) 1
- 6) a) 1  
b) 1
- 7) a) 1  
b) 1
- 8) 1
- 9) a) 1  
b) 1
- 10) a) 1  
b) 1
- 11) a) 1  
b) 1
- 12) a) 1  
b) 1
- 13) 1
- 14) 1
- 15) 1