**Transformations (F)**

Intervention Booklet

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Useful websites:**

**www.mathswatchvle.com**

*(Video explanations and questions)*

Username: STH…@twgash

Password: stmaths

**www.methodmaths.com**

*(Past papers online that get instantly marked)*

Centre ID: wga

Username: firstname

Password: lastname

**www.hegartymaths.com**

*(Online tutorials and quizzes)*

Login: first name and last name are case sensitive

**www.bbc.co.uk/schools/gcsebitesize/maths**

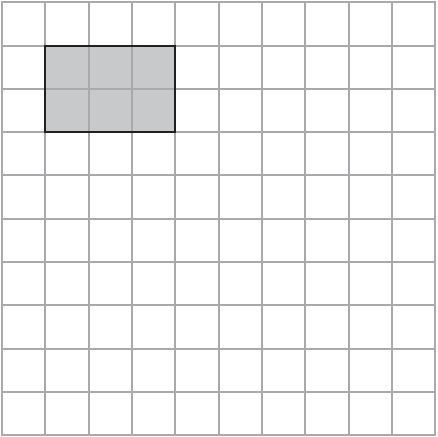
**Transformations**

**Things to remember:**

* Reflection – the shape is flipped in a mirror line
* Rotation – the shape is turned a number of degrees, around a centre, clockwise or anti-clockwise
* Translation – the shape is moved by a vector
* Enlargement – the shape is made bigger or smaller by a scale factor from a centre.

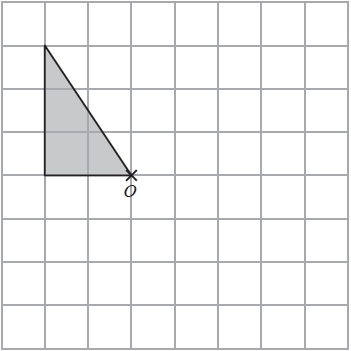
**Questions:**

**1.** (a)   On the grid, draw an enlargement of the rectangle with scale factor 2



**(1)**

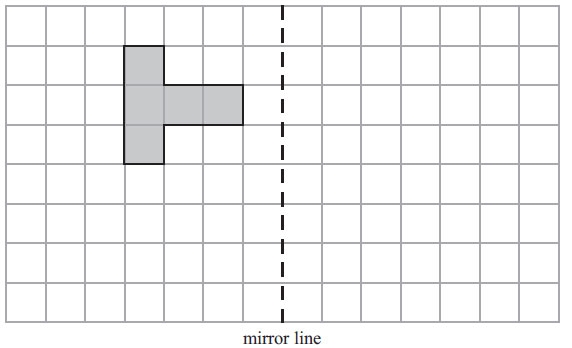
(b)   On the grid, rotate the triangle 90° clockwise about the point *O*.



**(2)**

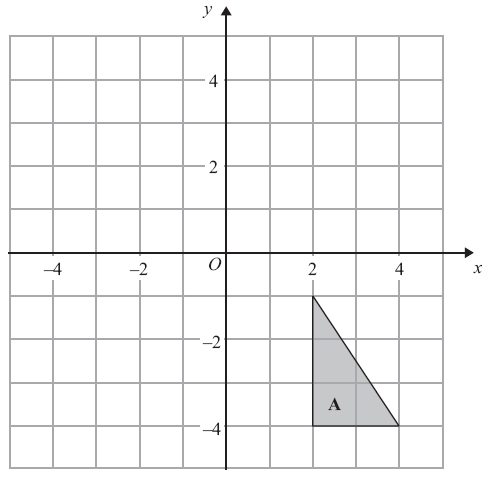
**(Total for question = 3 marks)**

**2.** Reflect the shaded shape in the mirror line.



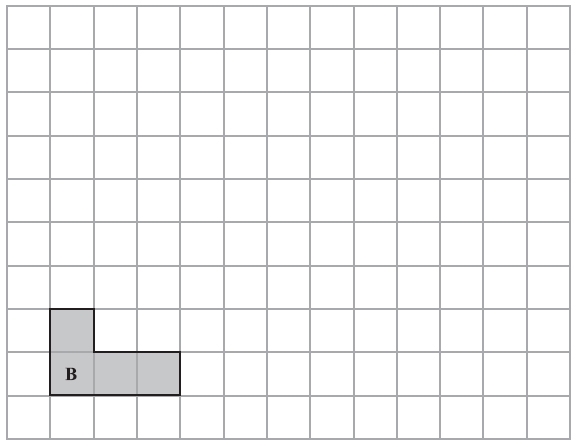
**(Total for Question is 2 marks)**

**3.** (a) Reflect triangle **A** in the *x*-axis.



**(2)**

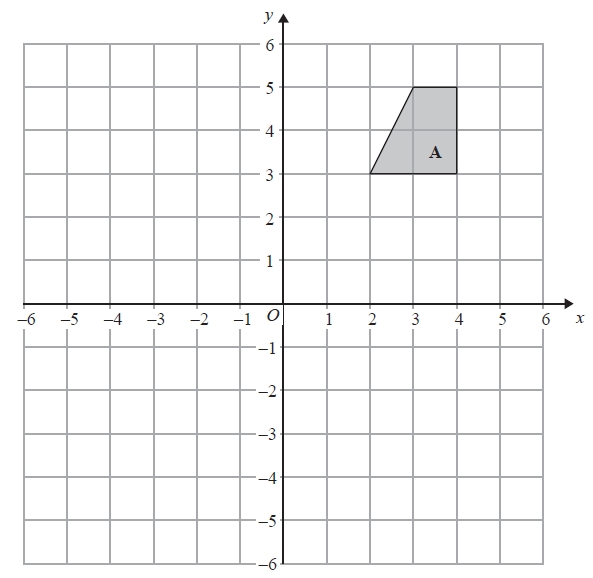
(b) Draw an enlargement, scale factor 3, of shape **B**.



**(2)**

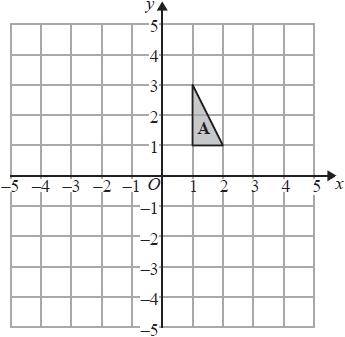
**(Total for Question is 4 marks)**

**4.** On the grid, rotate shape **A** 180° about the point (1, 1).



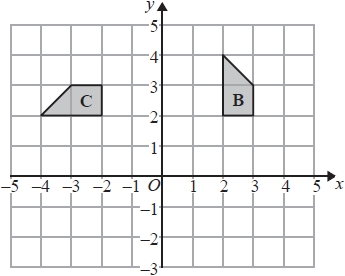
**Total for Question is 2 marks)**

**5.** (a)  On the grid above, translate shape **A** by the vector 



**(2)**

(b)   Describe fully the single transformation that maps shape **B** onto shape **C**.



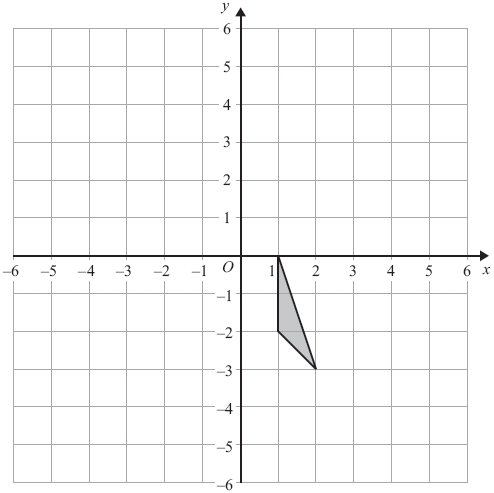
.............................................................................................................................................

.............................................................................................................................................

**(3)**

**(Total for question = 5 marks)**

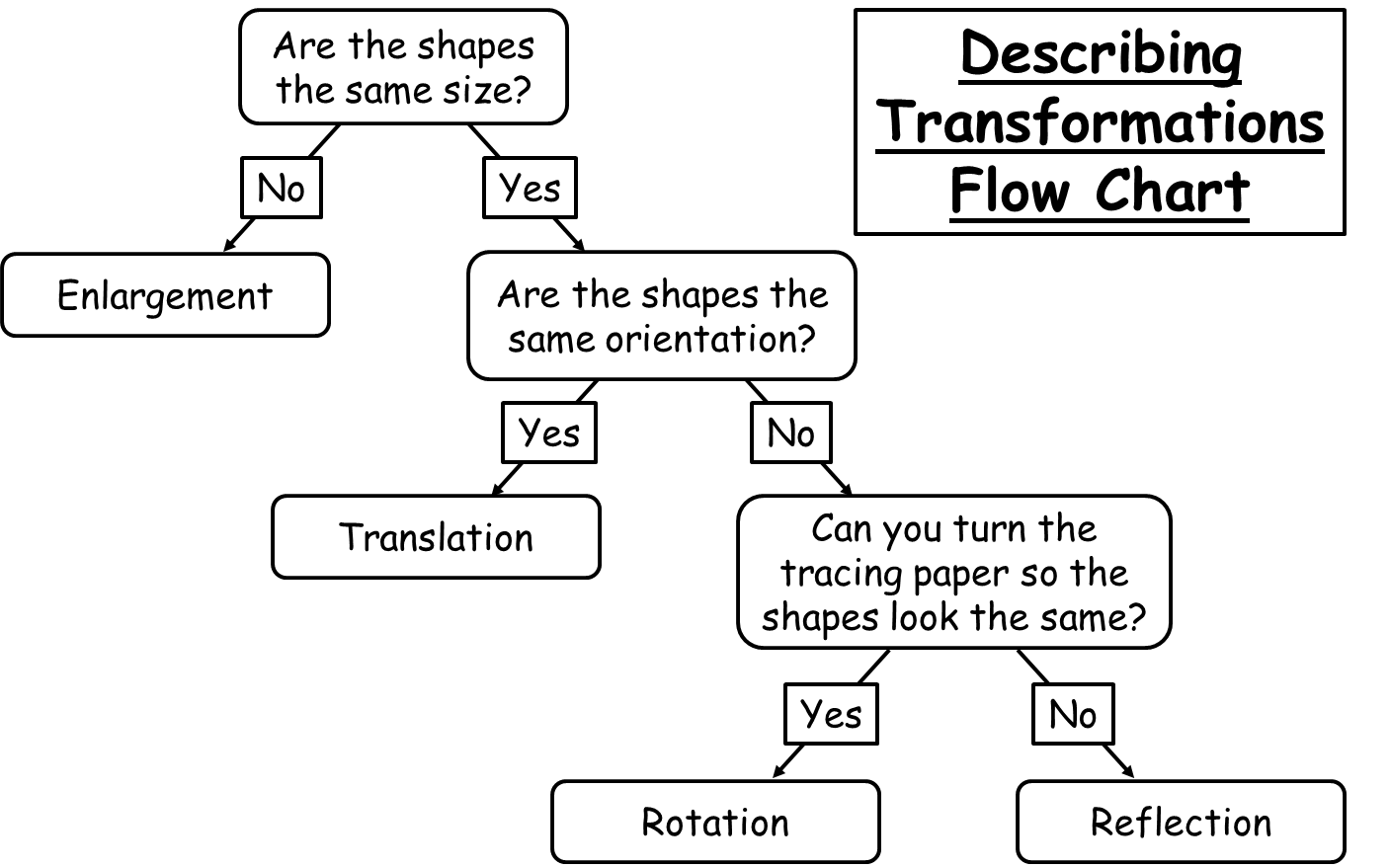
**6.** Translate the triangle by .



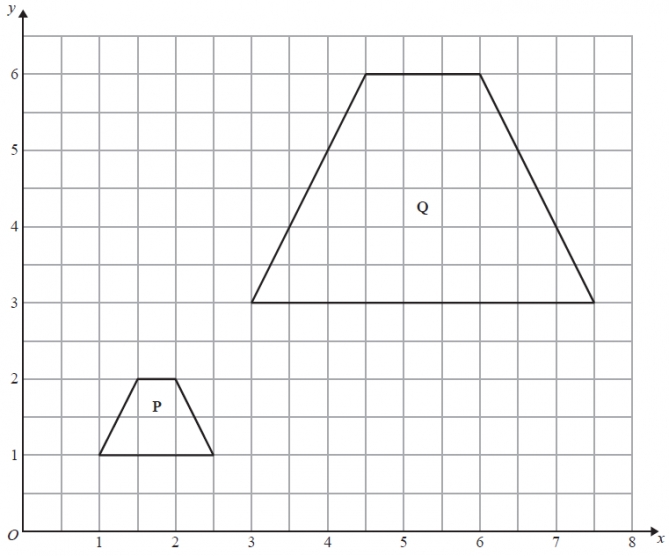
**(Total for Question is 2 marks)**

**Describing Transformations**

**Things to remember:**



**Questions:**

**1.** Describe fully the single

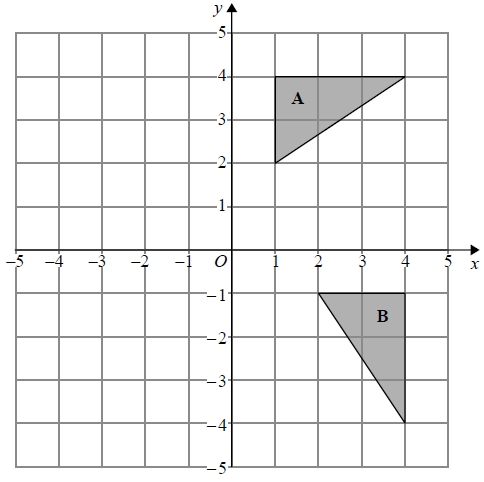
transformation that maps shape P onto shape Q.

…………………………………

…………………………………

…………………………………

**(Total for Question is 3 marks)**



**2.** Describe fully the single transformation

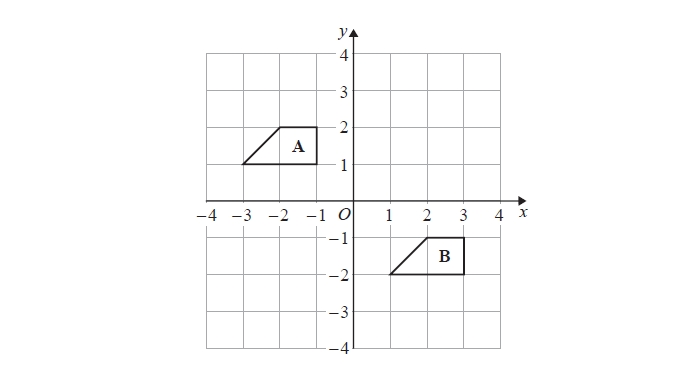
that maps triangle A onto triangle B.

…………………………………

…………………………………

…………………………………

**(Total for question = 2 marks)**

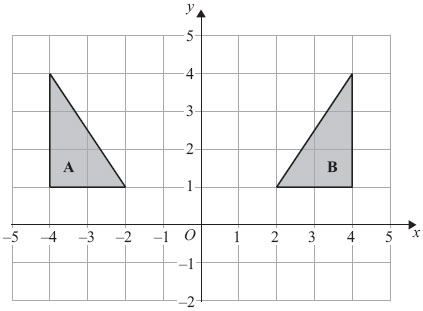
**3.** Describe the single transformation that

maps shape A onto shape B.

…………………………………

…………………………………

**(Total for question = 2 marks)**

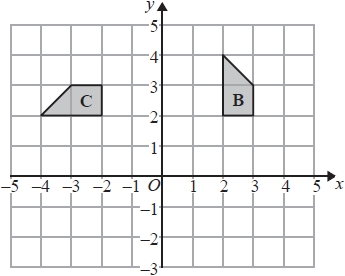
**4.** Describe fully the single

transformation that maps shape A onto shape B.

…………………………………

…………………………………

**(Total for Question is 2 marks)**

**5.** Describe fully the single

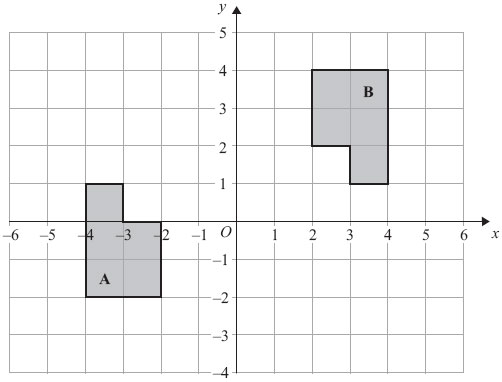
transformation that maps shape B onto shape C.

…………………………………

…………………………………

…………………………………

**(Total for question = 3 marks)**

**6.** Describe fully the single

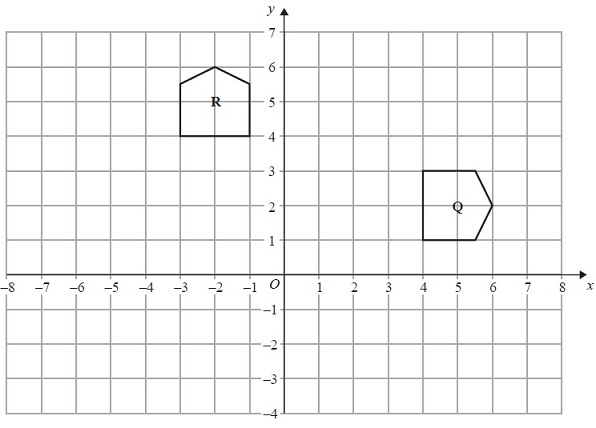
transformation that maps shape A onto shape B.

…………………………………

…………………………………

…………………………………

**(Total for Question is 3 marks)**

**7.** Describe fully the single

transformation that maps shape Q onto shape R.

…………………………………

…………………………………

…………………………………

**(Total for Question is 3 marks)**