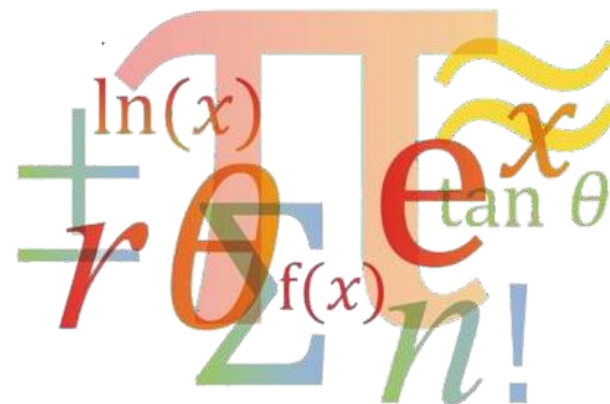
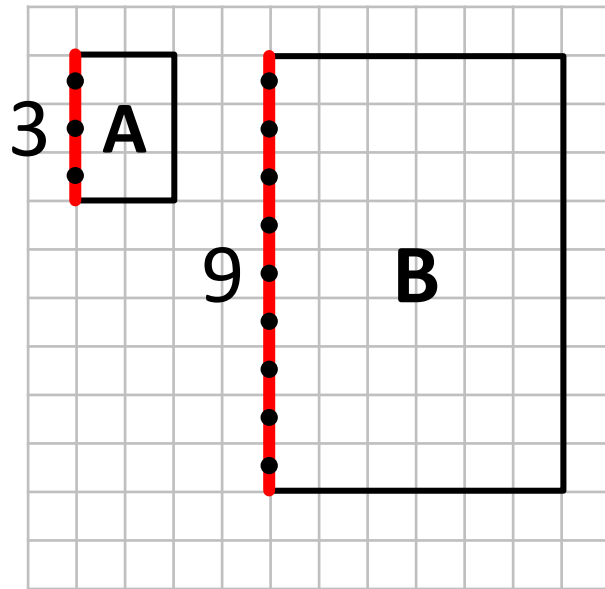


# Topic: Enlargement



**Ex1** Work out the scale factor that enlarges rectangle A onto rectangle B.

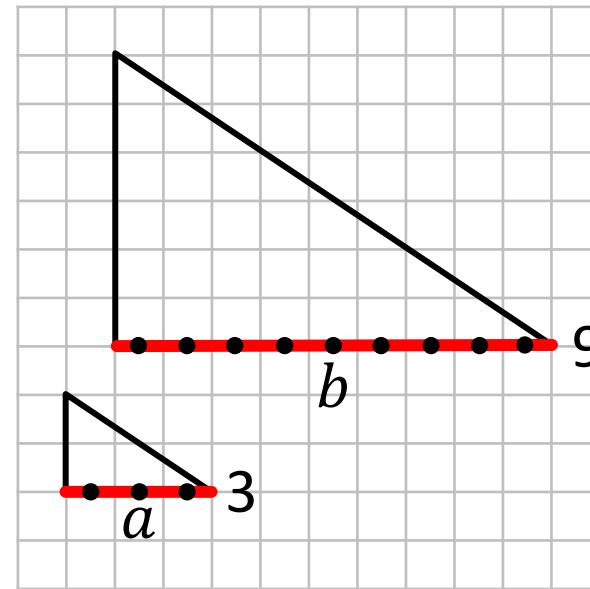
Solution



Scale factor  
 $9 \div 3 = 3$

**Ex2** Here are two similar right-angled triangles. Write the ratio of side  $a$  to side  $b$ .

Solution



$\div 3$

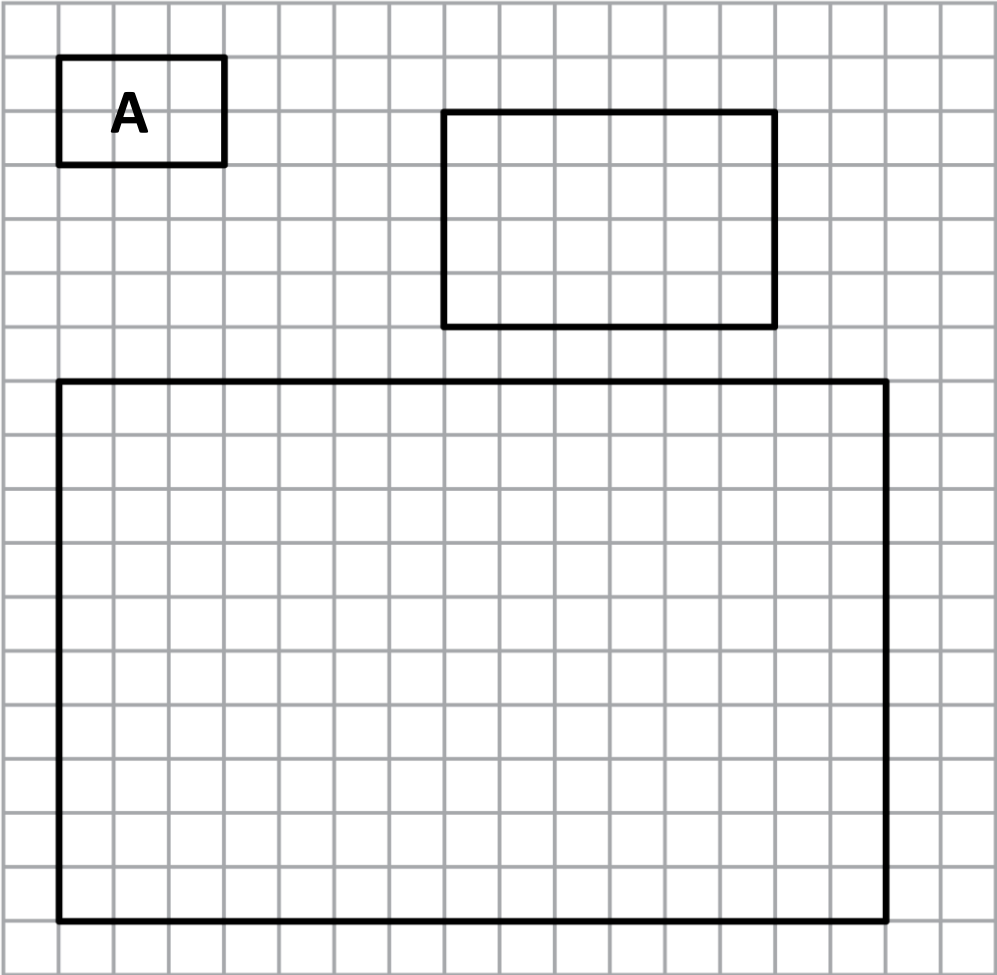
Ratio  
 $\frac{a : b}{3 : 9}$   
 $\frac{1 : 3}{1 : 3}$

$\frac{1}{3}$

Q1

Find the scale factor the enlarges **A** onto each of the other rectangles.

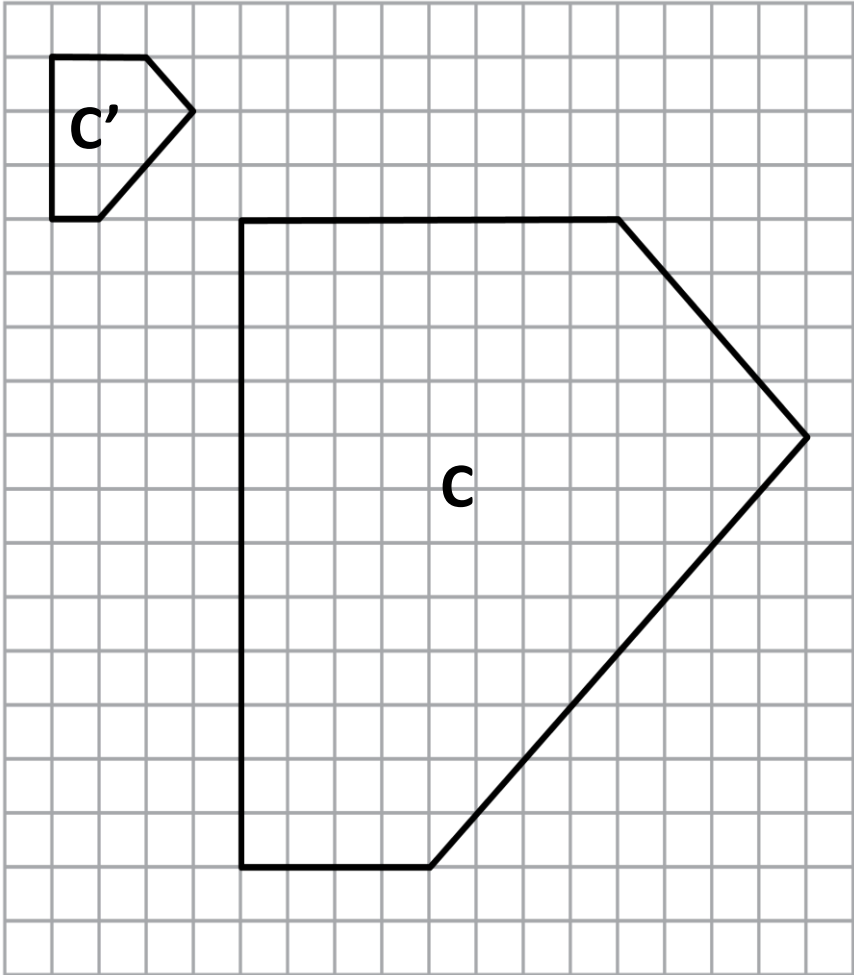
Solution



Q2

Find the scale factor that enlarges **C** onto **C'**.

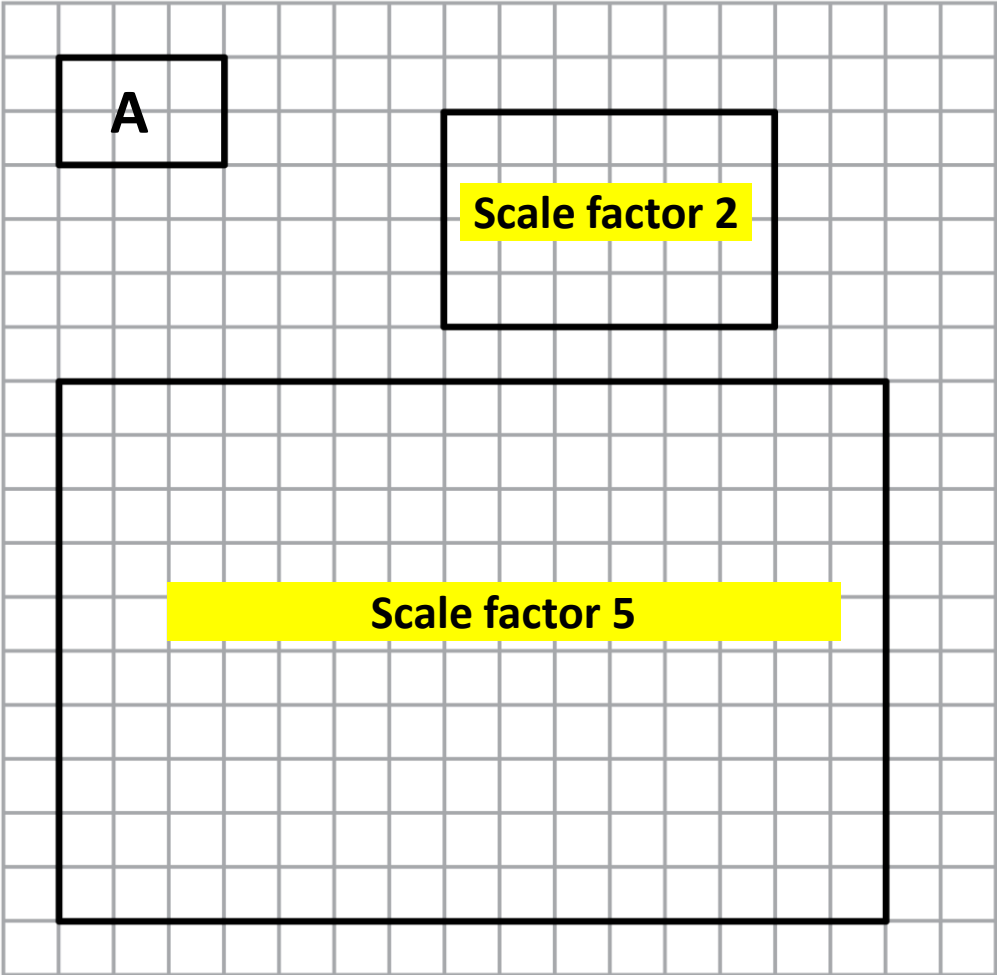
Solution



Q1

Find the scale factor the enlarges **A** onto each of the other rectangles.

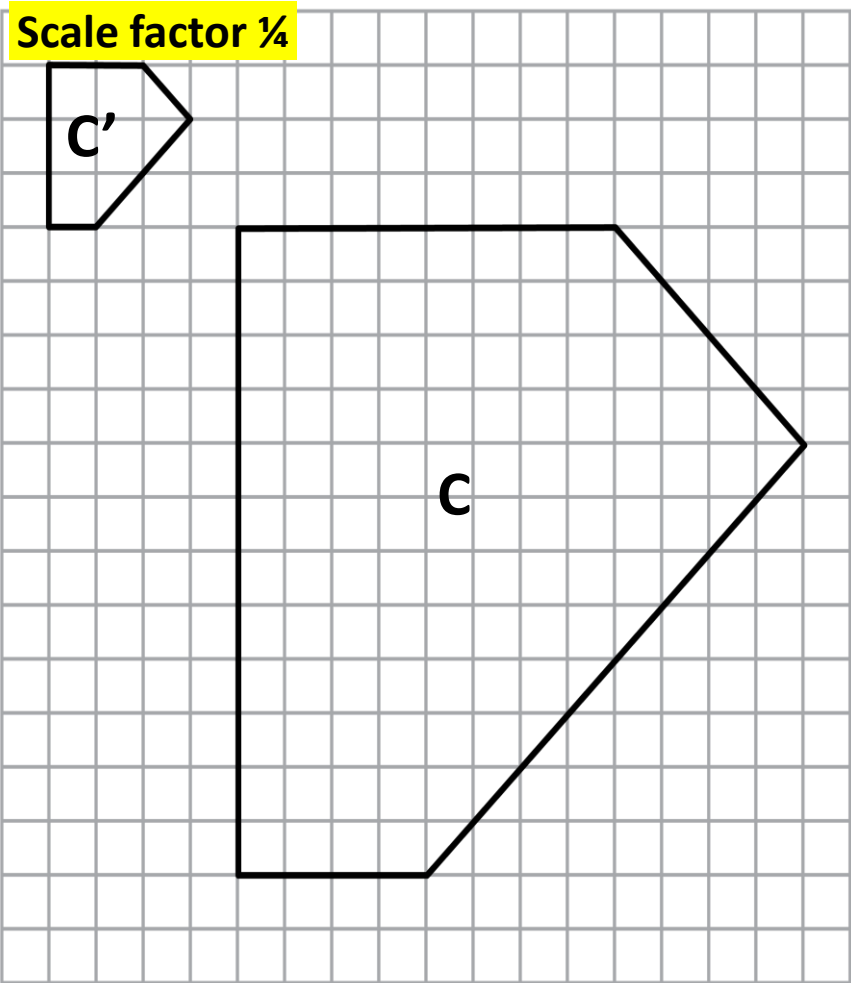
Solution



Q2

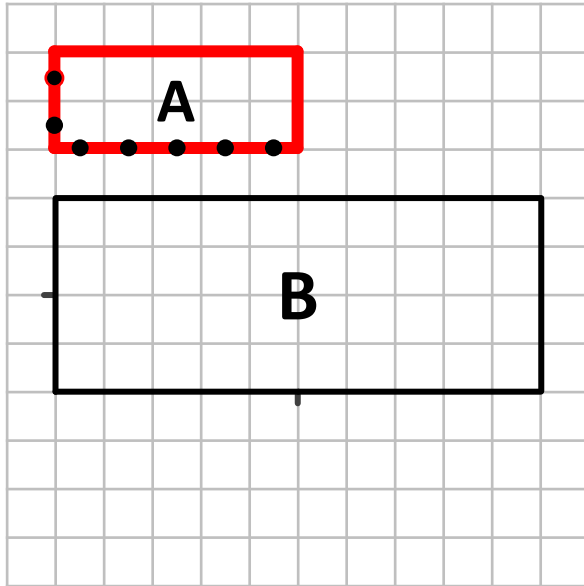
Find the scale factor that enlarges **C** onto **C'**.

Solution



**Ex3** Enlarge shape A by a scale factor of 2 and label its image B.

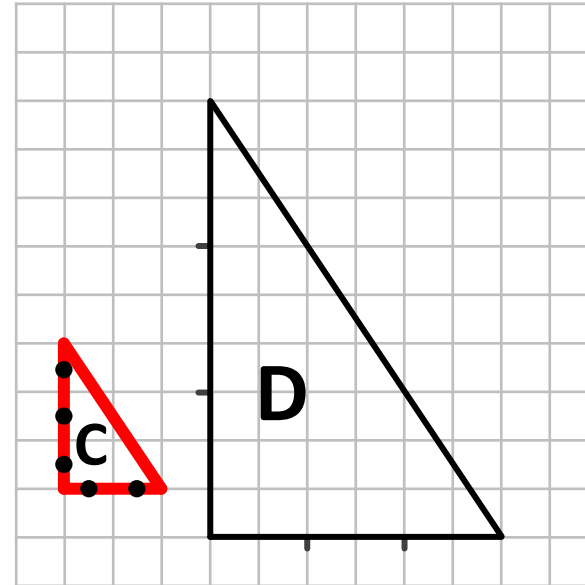
Solution



**Ex4**

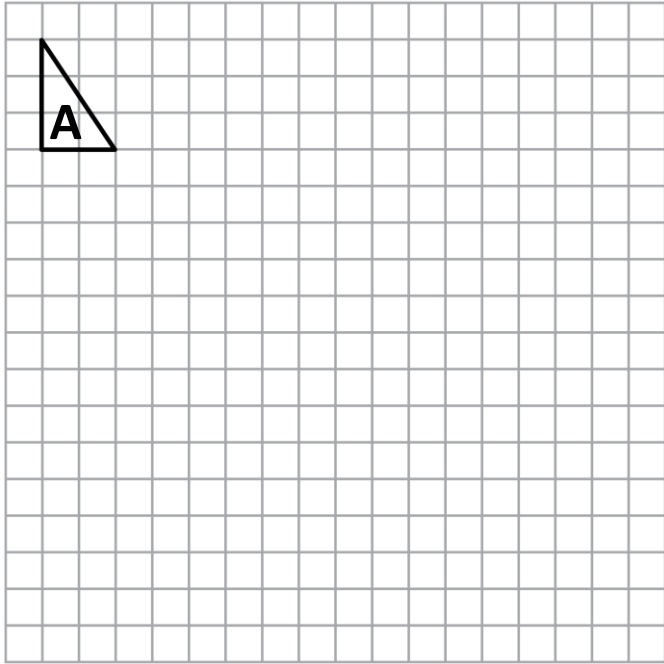
Enlarge shape C by a scale factor of 3 and label its image D.

Solution



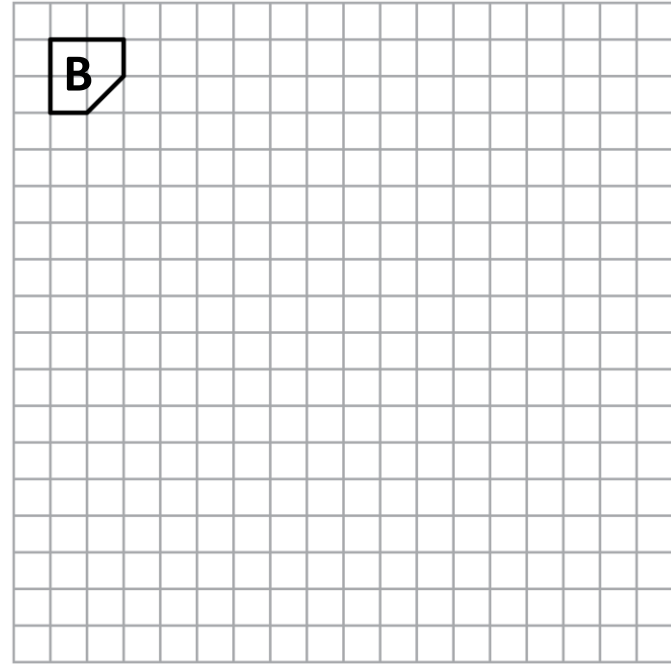
**Q1** Enlarge **A** by a scale factor 3.

Solution



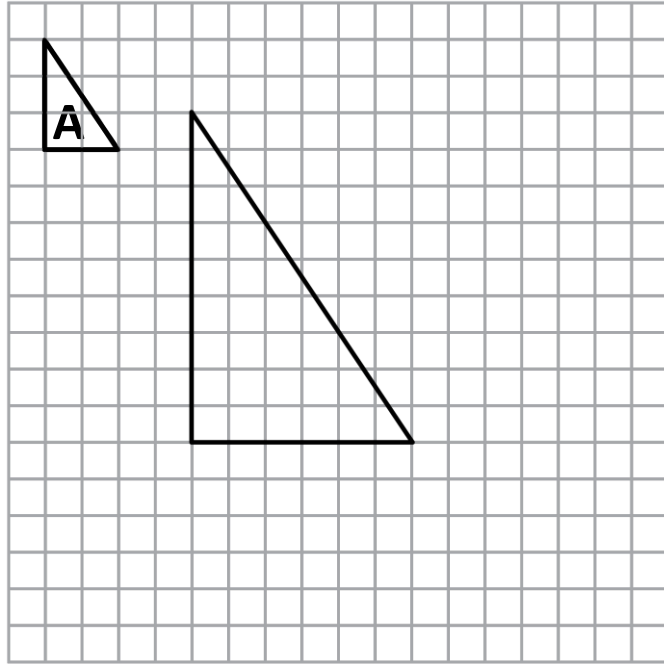
**Q2** Enlarge **B** by a scale factor 5.

Solution



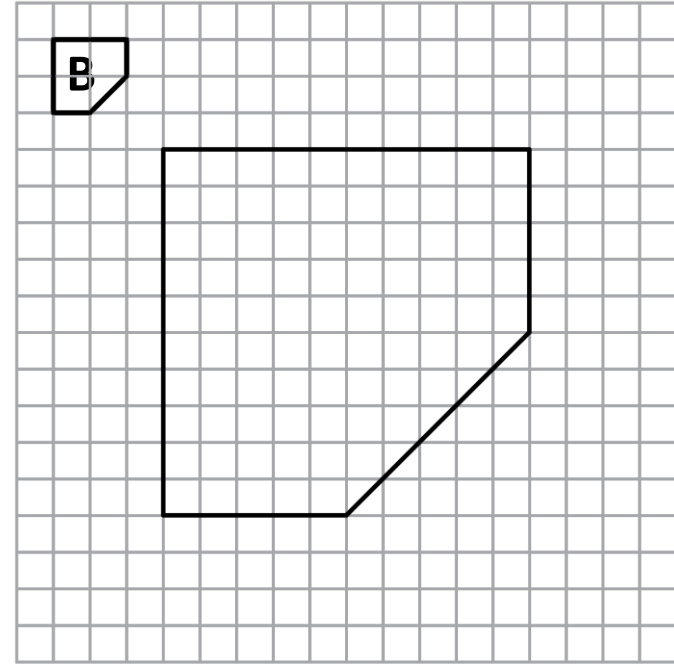
**Q1** Enlarge **A** by a scale factor 3.

Solution



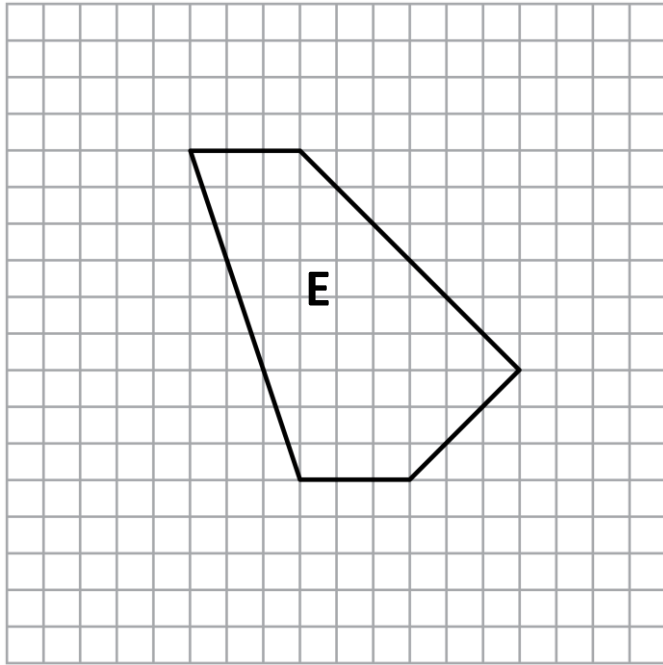
**Q2** Enlarge **B** by a scale factor 5.

Solution



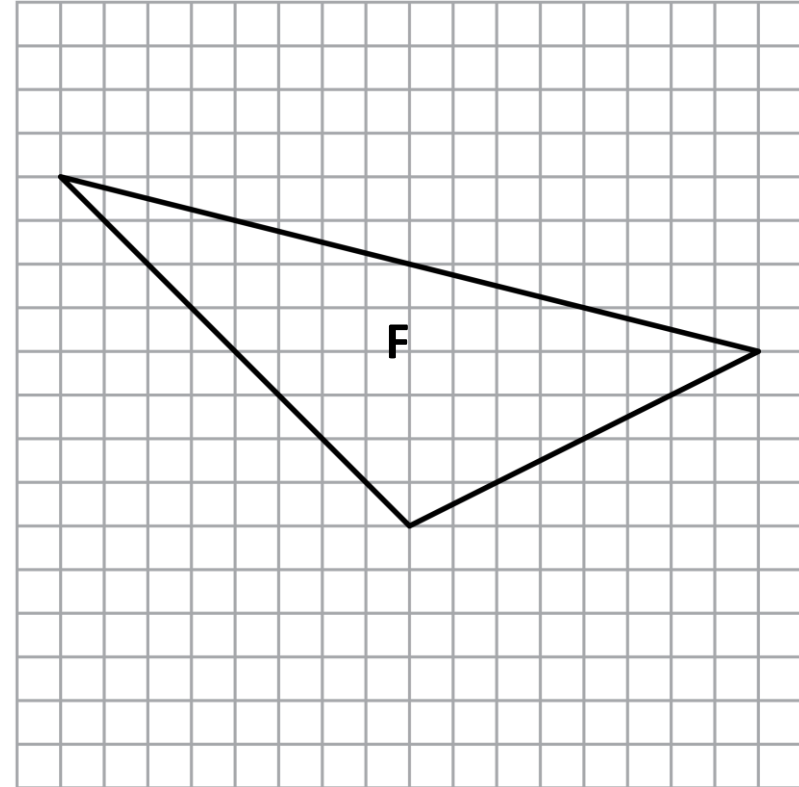
**Q3** Enlarge **E** by a scale factor  $\frac{1}{3}$ .

Solution



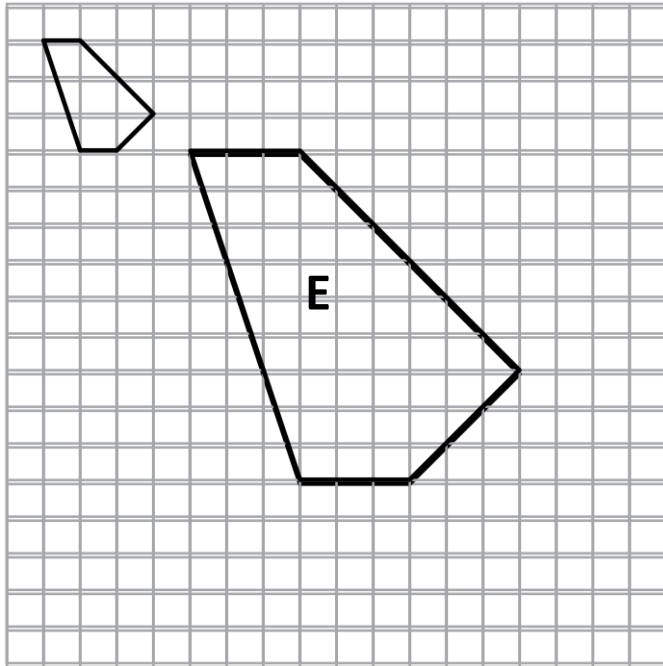
**Q4** Enlarge **F** by a scale factor  $\frac{1}{4}$ .

Solution



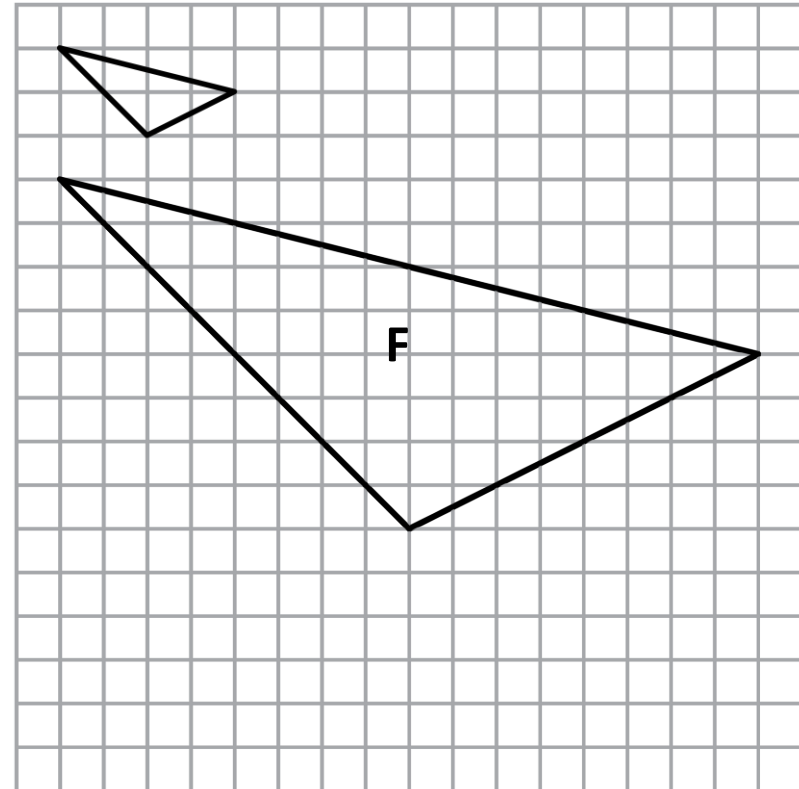
**Q3** Enlarge **E** by a scale factor  $\frac{1}{3}$ .

Solution



**Q4** Enlarge **F** by a scale factor  $\frac{1}{4}$ .

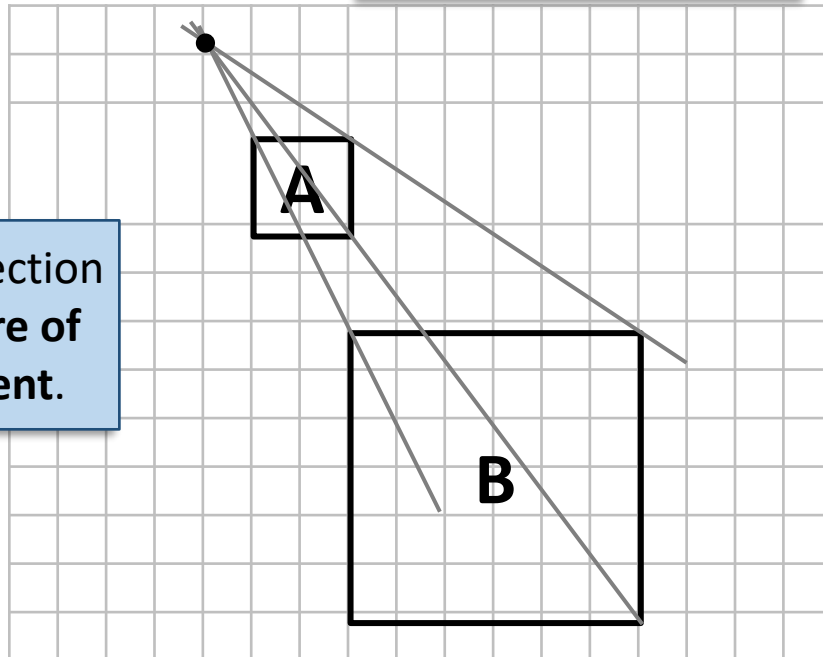
Solution



**Ex5** Find the point about which shape A was enlarged to produce shape B.

Solution

Draw lines through corresponding vertices.

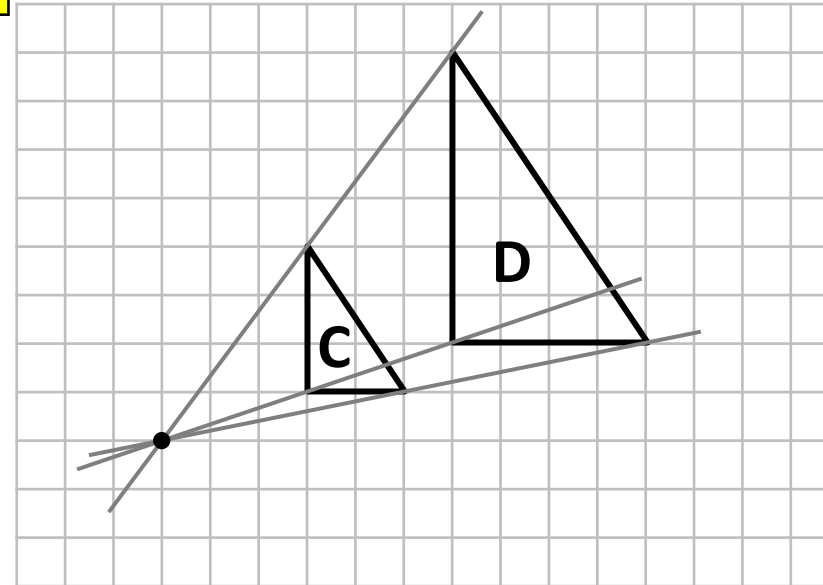


Their intersection is the **centre of enlargement**.

**Ex6**

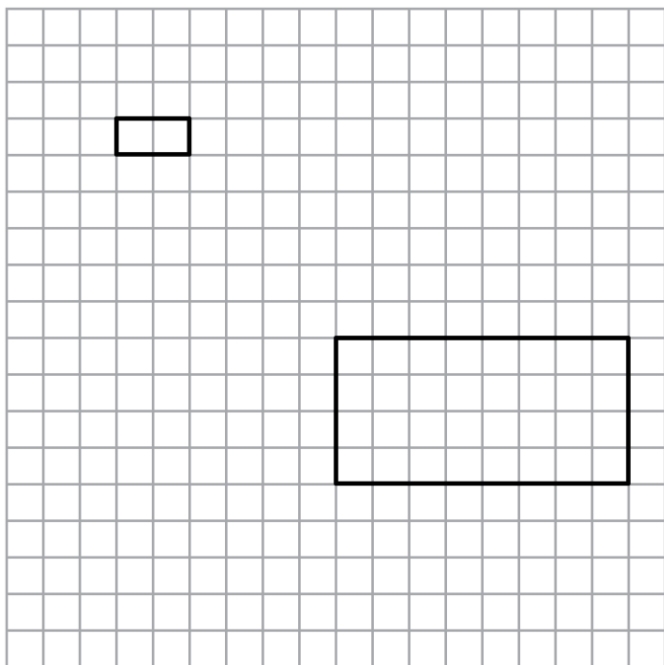
Find the point about which shape C was enlarged to produce shape D.

Solution



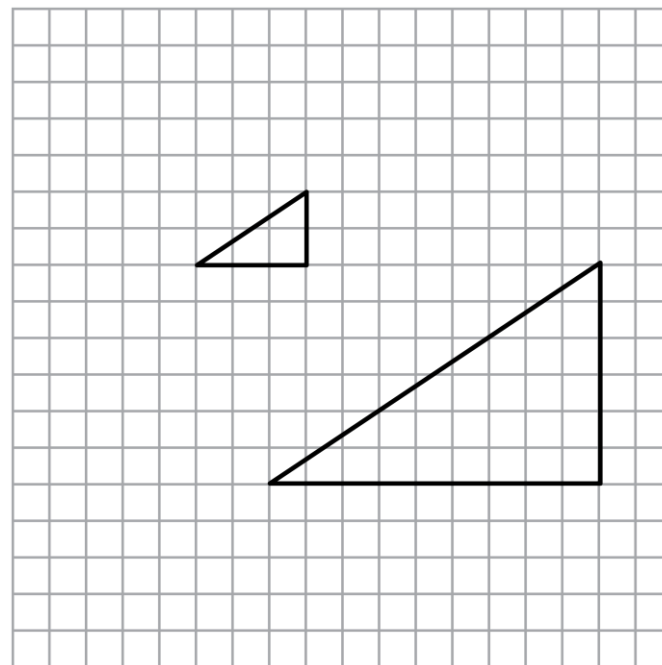
**Q1** Find the centre of enlargement.

Solution



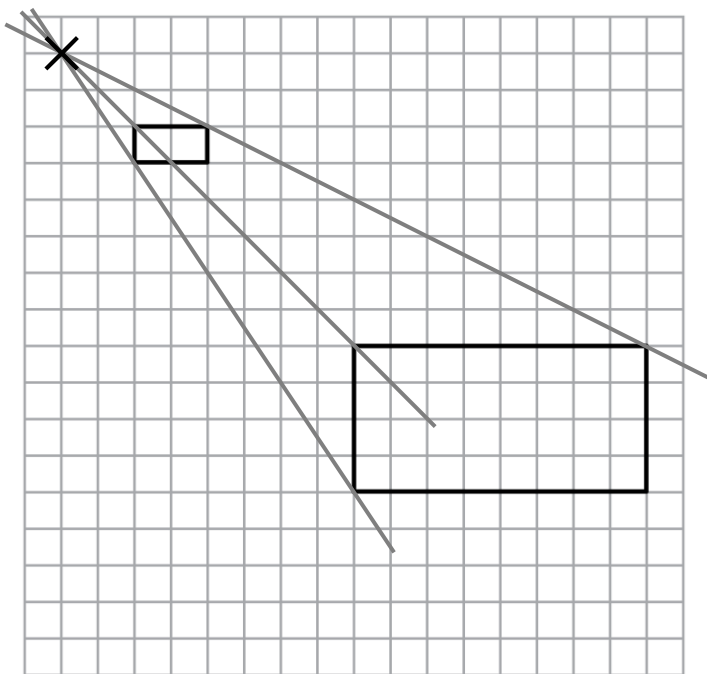
**Q2** Find the centre of enlargement.

Solution



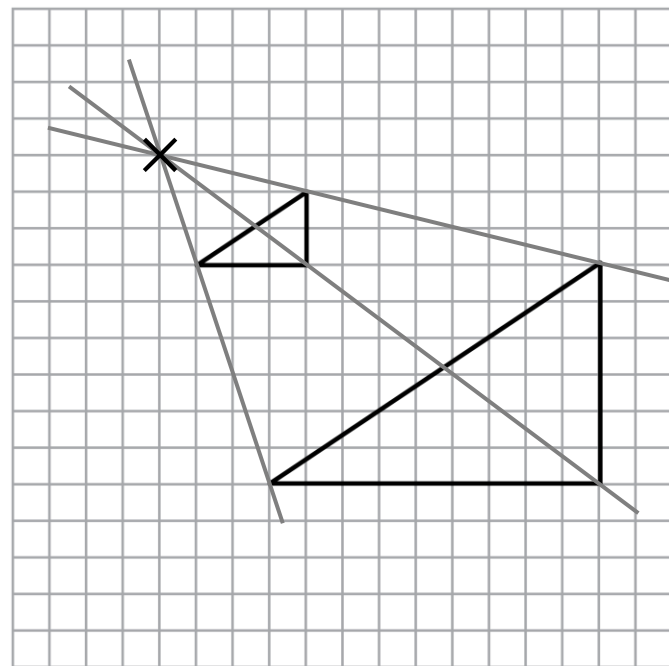
**Q1** Find the centre of enlargement.

Solution



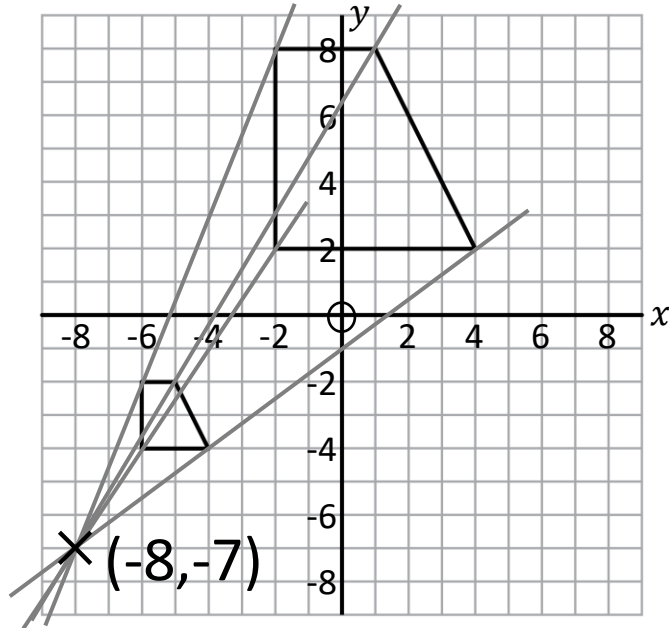
**Q2** Find the centre of enlargement.

Solution



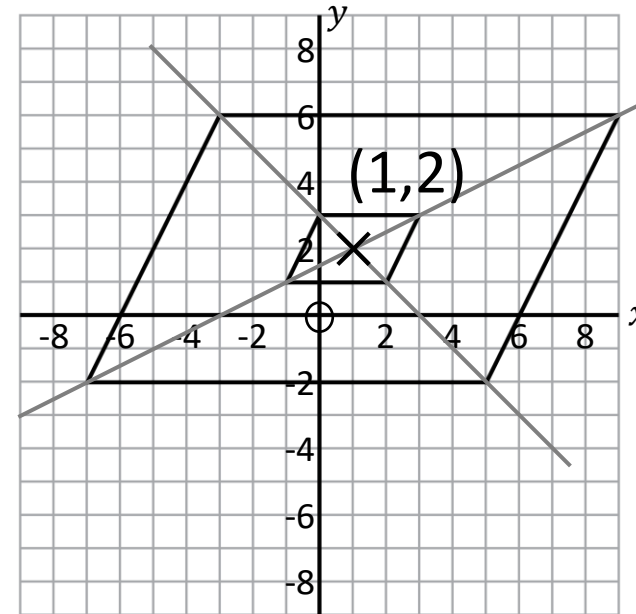
**Q3** Give the coordinates of the centre of enlargement.

Solution



**Q4** Give the coordinates of the centre of enlargement.

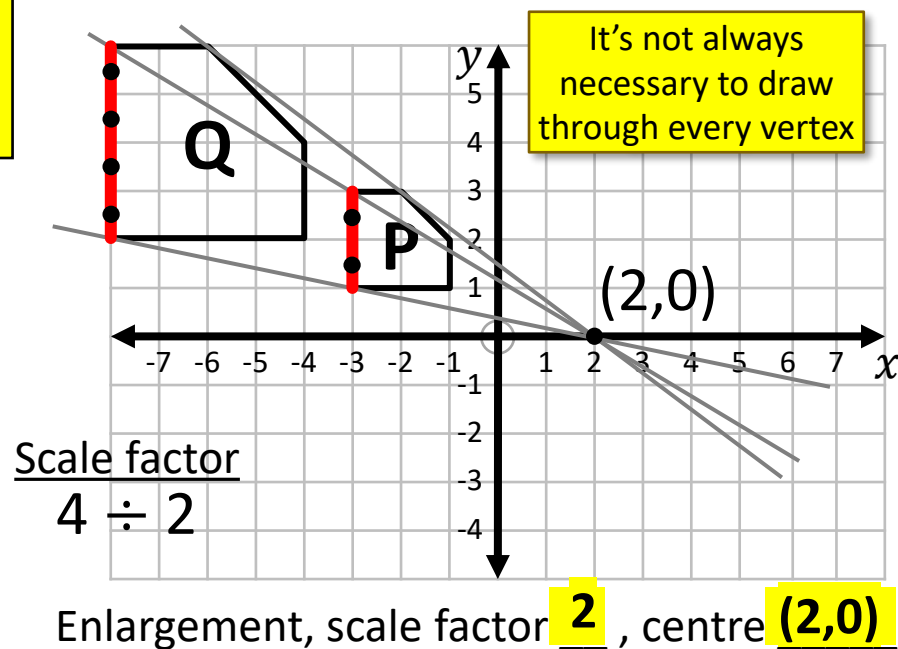
Solution



**Ex7**

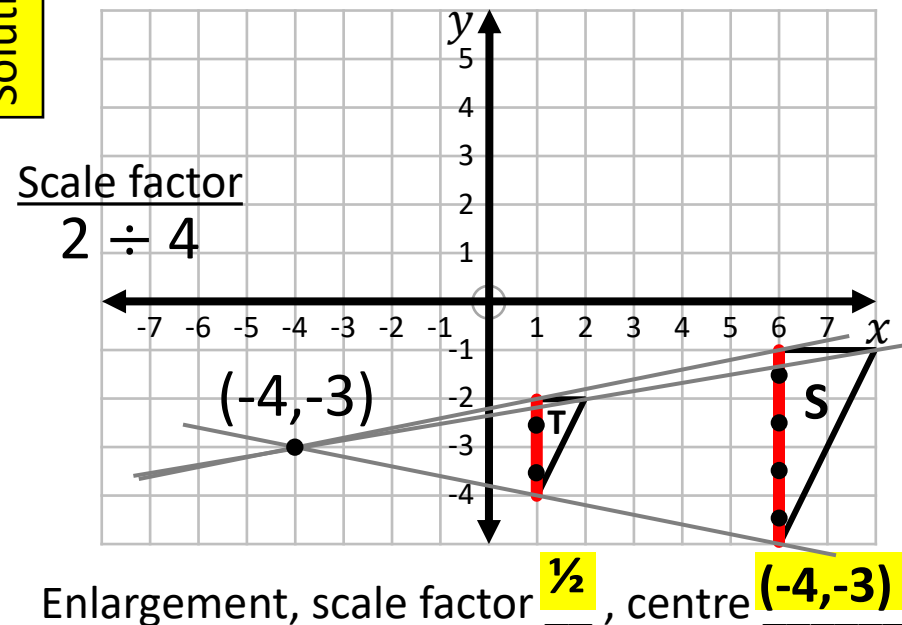
Describe fully the single transformation that maps P onto Q.

Solution

**Ex8**

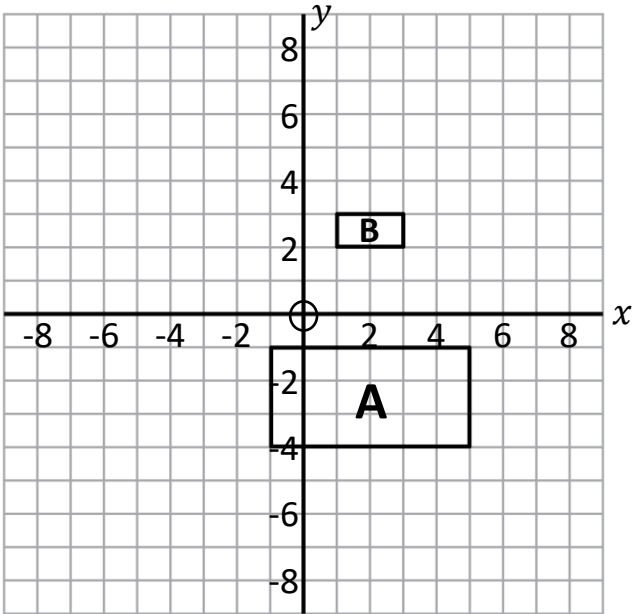
Describe fully the single transformation that maps S onto T.

Solution



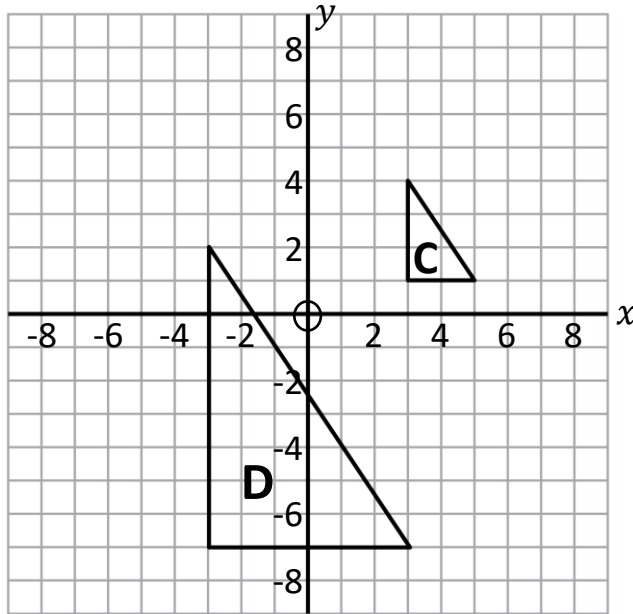
**Q1** Describe fully the single transformation that maps A onto B.

Solution



**Q2** Describe fully the single transformation that maps C onto D.

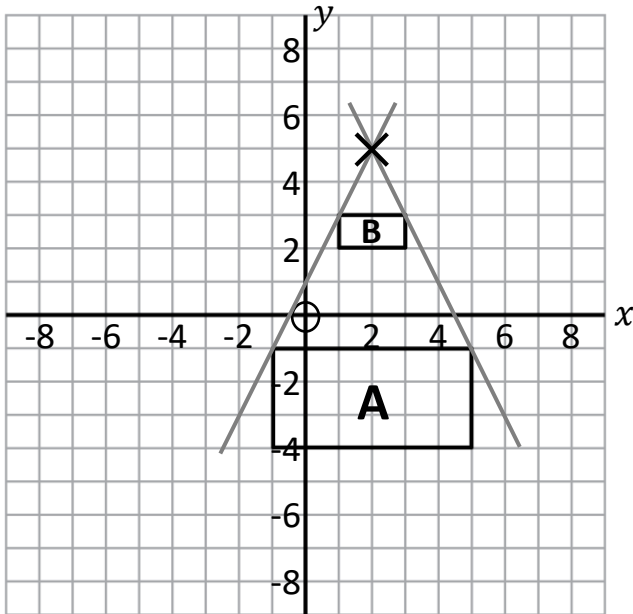
Solution



**Q1** Describe fully the single transformation that maps A onto B.

Solution

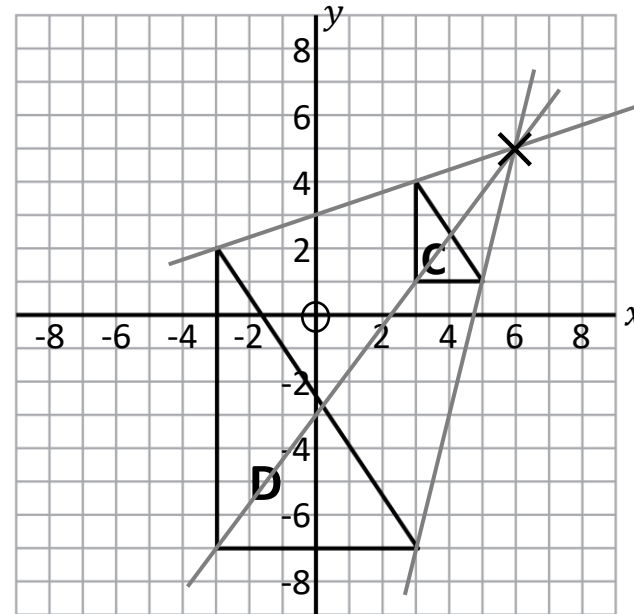
**Enlargement**  
**Scale factor  $\frac{1}{3}$**   
**Centre (2,5)**



**Q2** Describe fully the single transformation that maps C onto D.

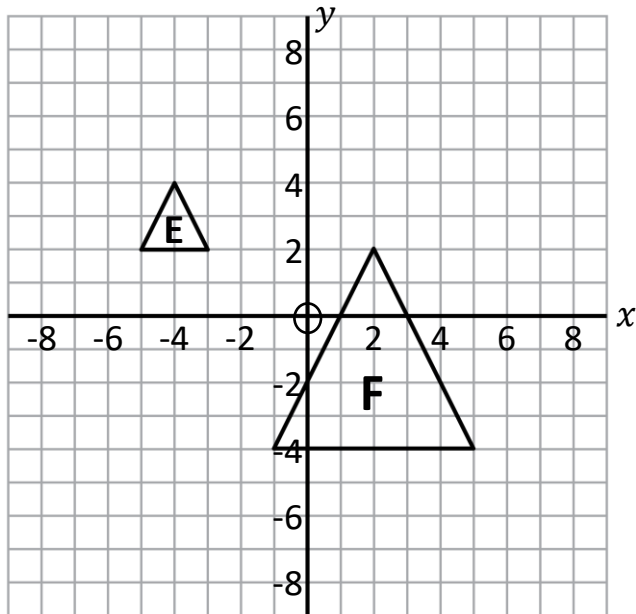
Solution

**Enlargement**  
**Scale factor 3**  
**Centre (6,5)**



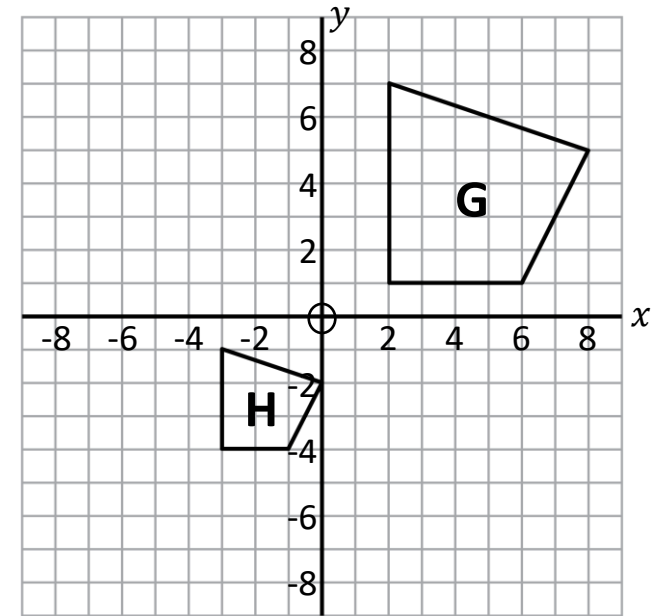
**Q3** Describe fully the single transformation that maps E onto F.

Solution



**Q4** Describe fully the single transformation that maps G onto H.

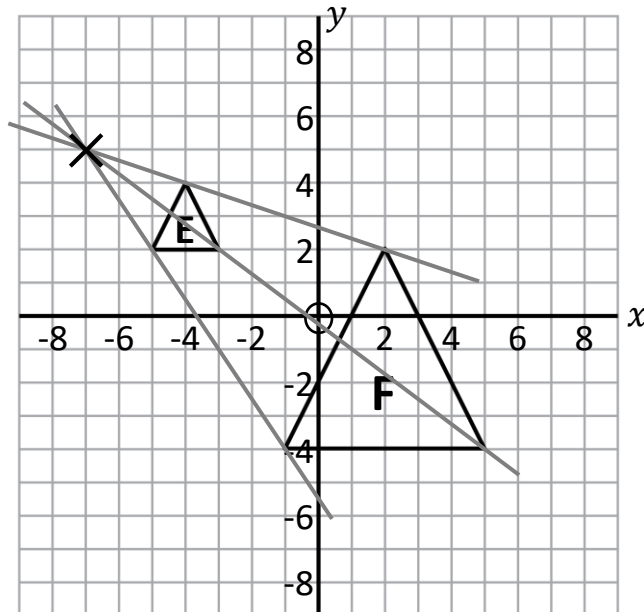
Solution



**Q3** Describe fully the single transformation that maps E onto F.

Solution

**Enlargement**  
**Scale factor 3**  
**Centre  $(-7, 5)$**



**Q4** Describe fully the single transformation that maps G onto H.

Solution

**Enlargement**  
**Scale factor  $\frac{1}{2}$**   
**Centre  $(-8, -9)$**

