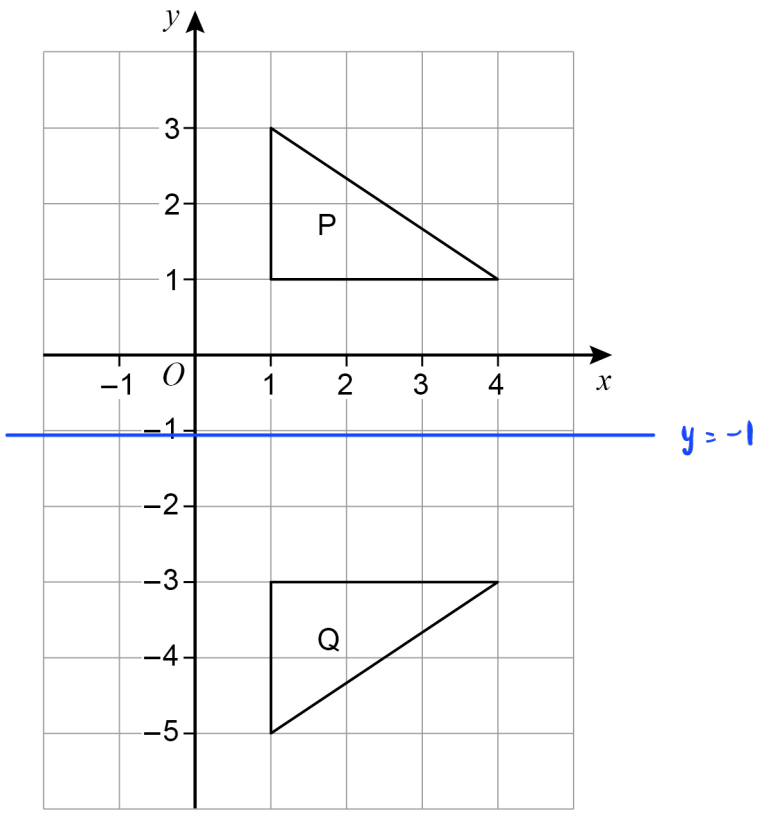
1 (a) Here are two triangles, P and Q.



Here is a statement.

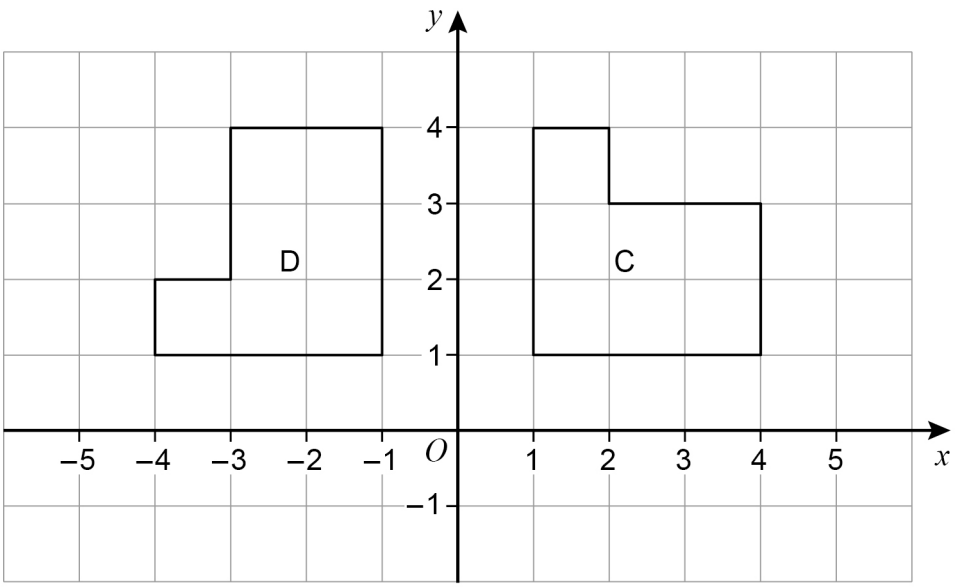
A transformation that maps P to Q is a reflection in the line $x = -1$

Make **one** criticism of the statement.

[1 mark]

The line should be y = −1 (1)

1 (b) Here are two shapes, C and D.



Here is a statement.

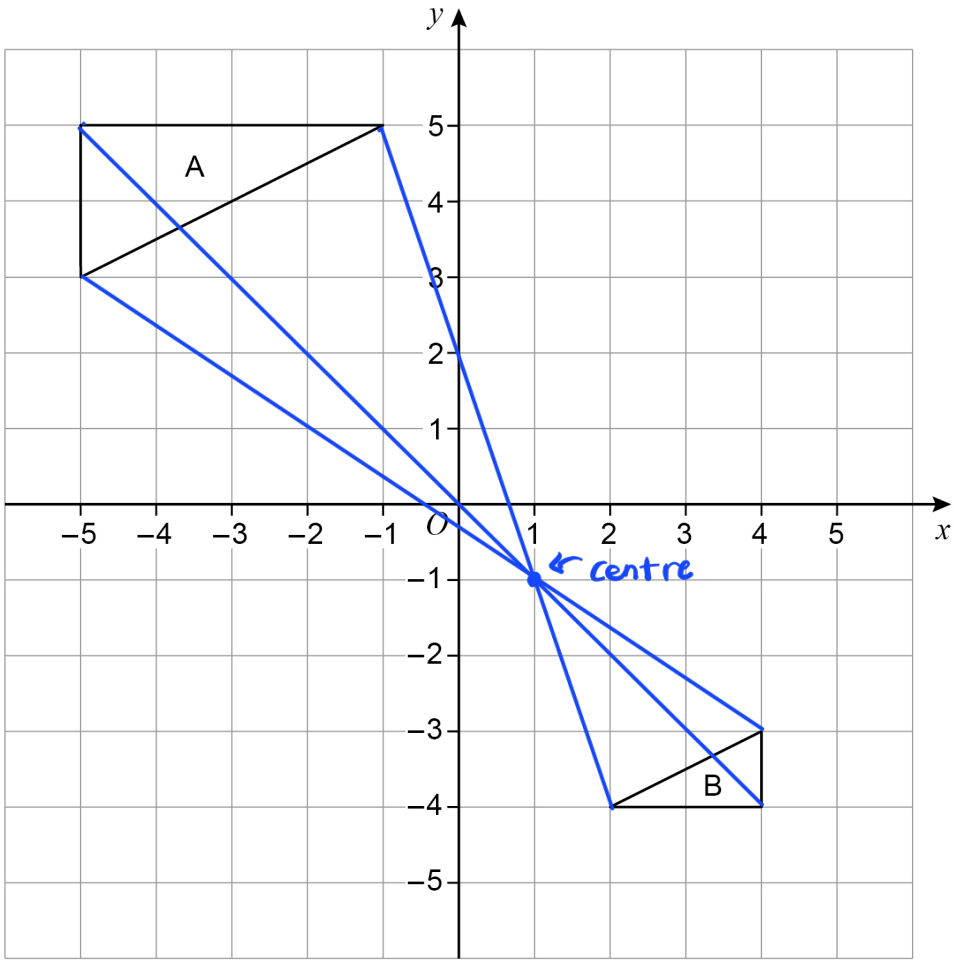
> A transformation that maps C to D is a rotation through 90° anticlockwise.

Make **one** criticism of the statement.

[1 mark]

should add the centre of rotation about O. (1)

2 Shape A and shape B are shown on the grid.



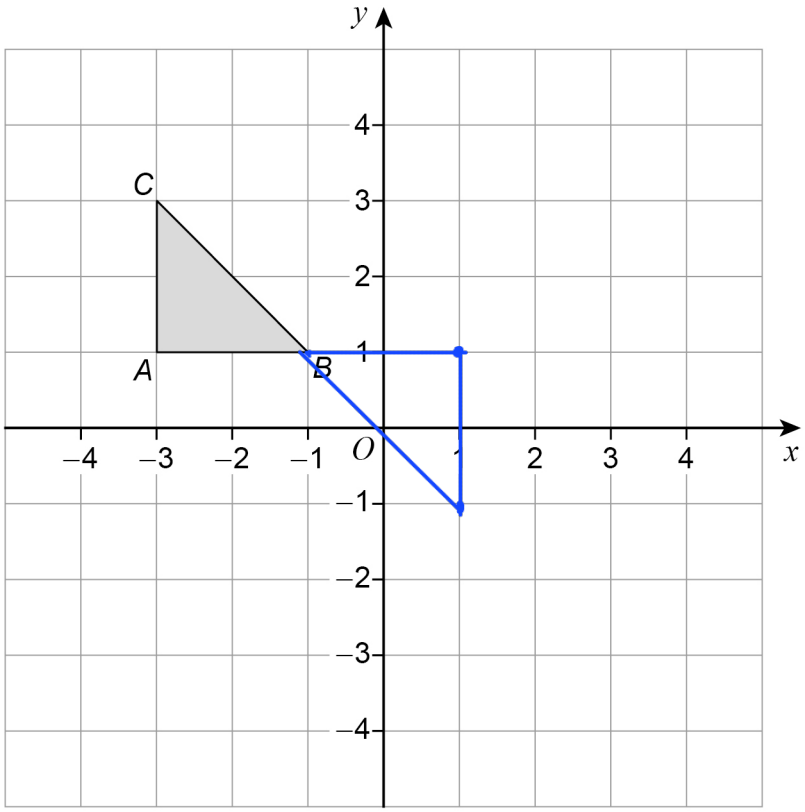
Describe the **single** transformation that maps shape A to shape B.

[3 marks]

Enlargement of scale factor $-\frac{1}{2}$ at centre (1, −1)

(1) (1) (1)

3 Here is triangle *ABC* on a grid.



Describe a **single** transformation of the triangle so that

point *B* is invariant

point *A* moves to (1, 1)

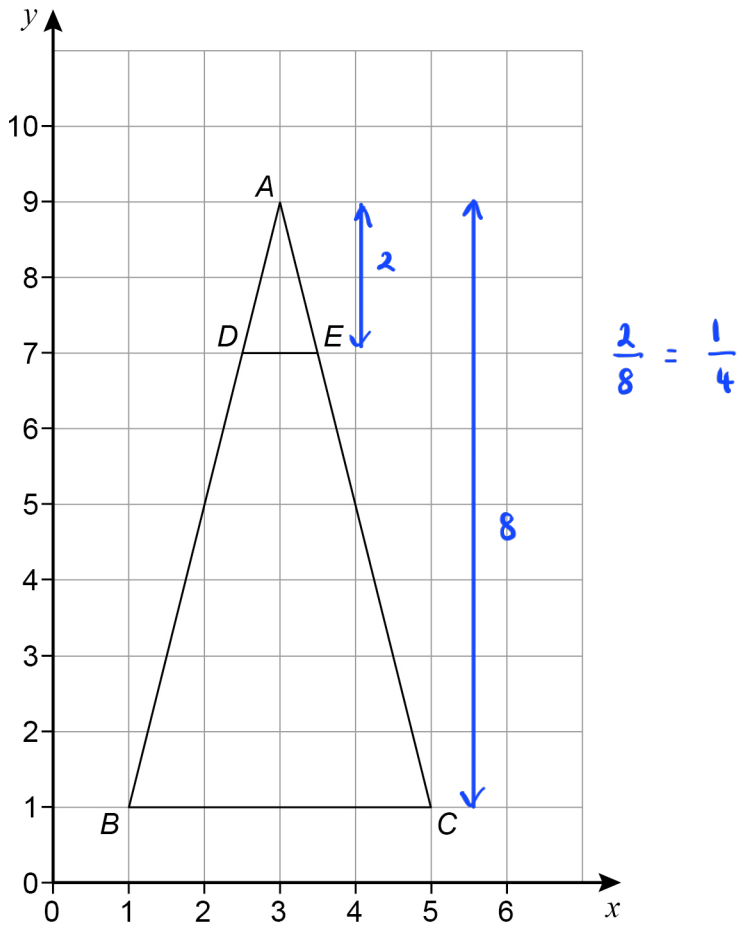
point *C* moves to (1, −1)

[3 marks]

Rotation of 180° about (-1, 1)

(1) (1) (1)

4



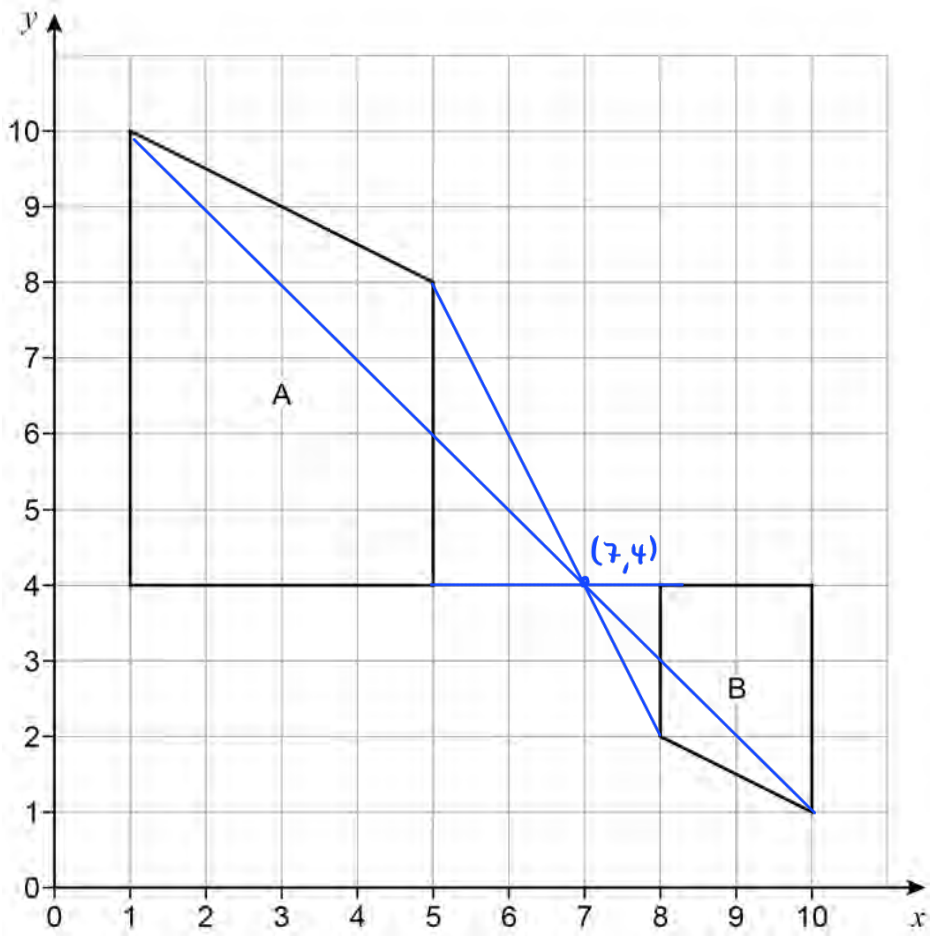
Describe fully the **single** transformation that maps triangle *ABC* to triangle *ADE*.

[3 marks]

Enlargement of scale factor $\frac{1}{4}$ at centre A.

(1) (1) (1)

5 Shape A and shape B are shown on the grid.

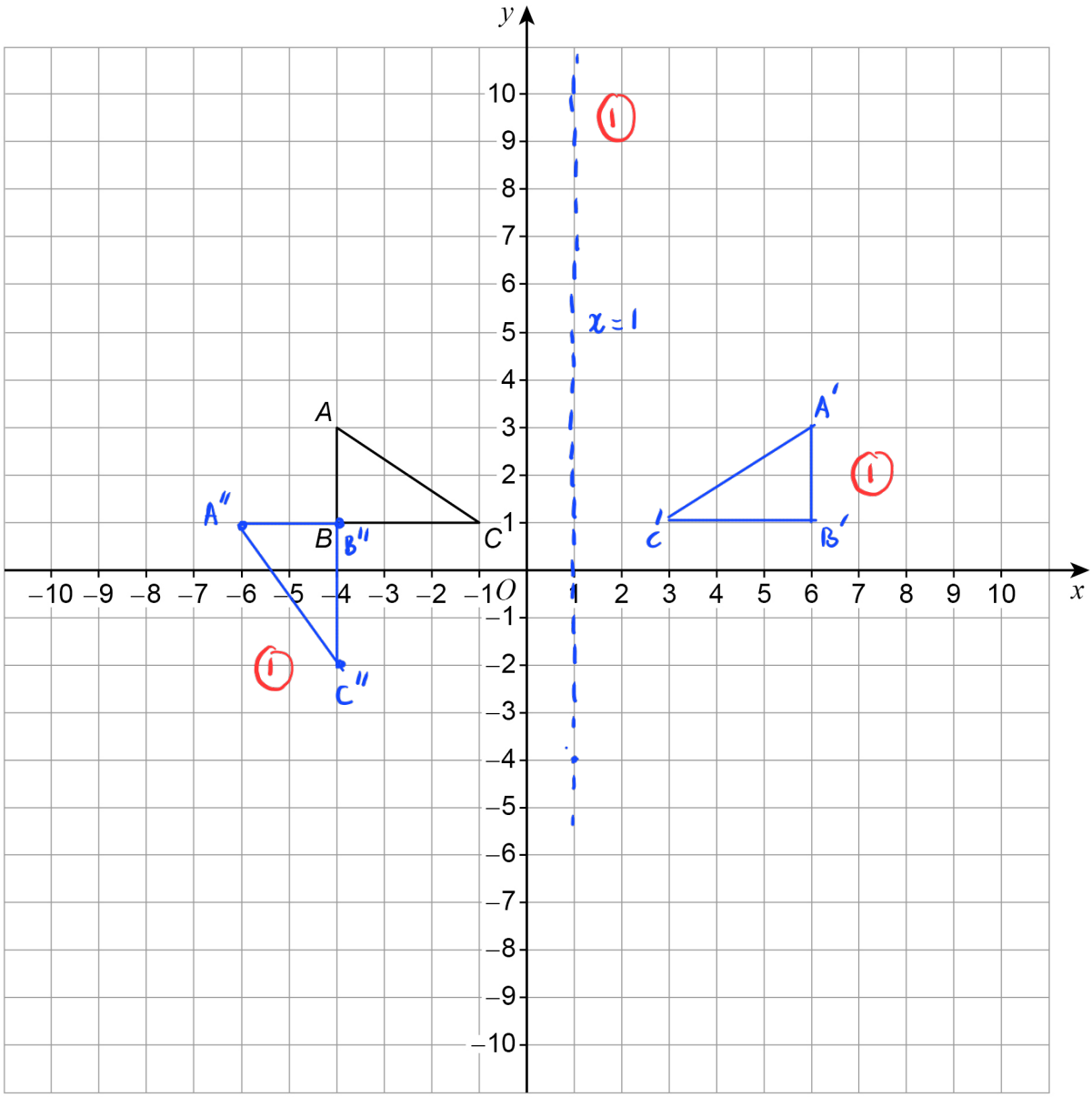


Describe the **single** transformation that maps shape A to shape B.

[3 marks]

Enlargement (1) of scale factor $(-\frac{1}{2})$ (1) at centre (7,4) (1)

6 Triangle *ABC* is drawn on a grid.



ABC is transformed to *A'B'C'* by a reflection in the line $x = 1$

A'B'C' is transformed to *A''B''C''* by a rotation 90° anticlockwise about (1, –4)

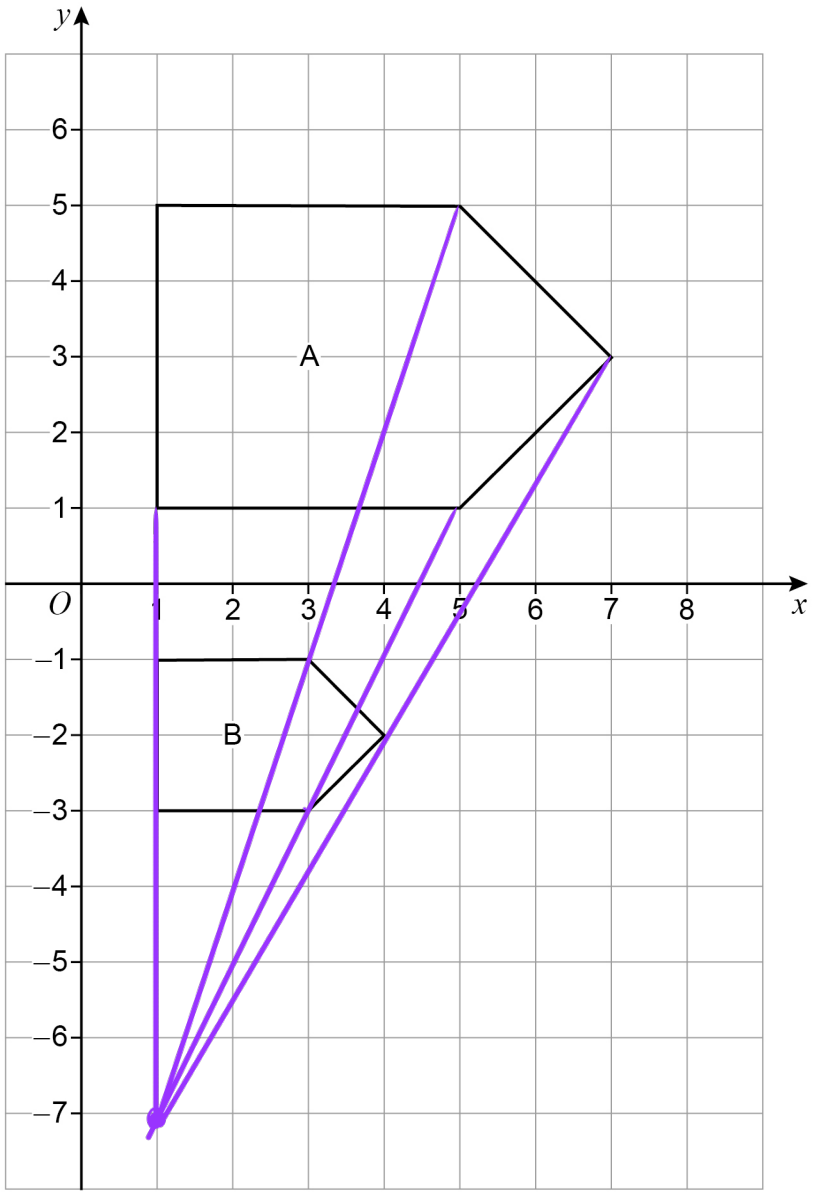
Which **one** point on *ABC* is invariant under the combined transformation?

You **must** show the result of each transformation on the grid.

[4 marks]

Answer B (1)

7



Describe fully the **single** transformation that maps shape A to shape B.

[3 marks]

Enlargement of scale factor $\frac{1}{2}$ at point $(1,-7)$.

✓1 ✓1 ✓1