



## Enlargement

- Enlarging an object
- Describing enlargements

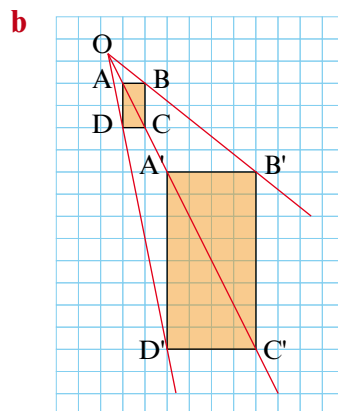
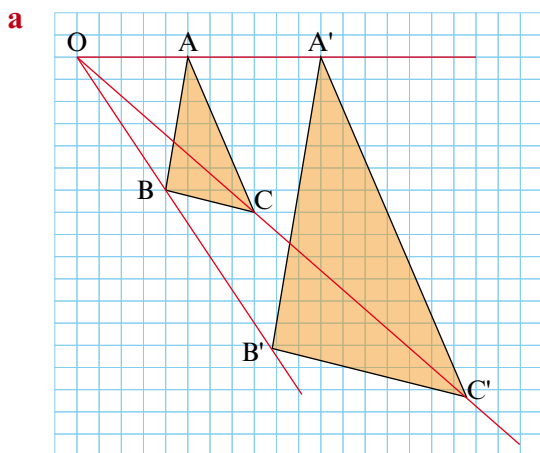
Keywords

You should know

explanation 1a

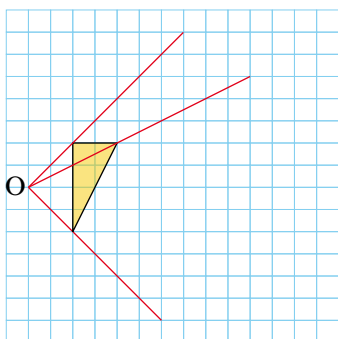
explanation 1b

**1** Calculate each scale factor of enlargement.

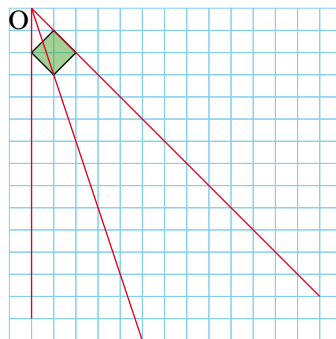


**2** In each diagram, an object and a centre of enlargement  $O$  are shown. Copy each diagram and enlarge the object by the given scale factor.

**a** Enlargement scale factor 3

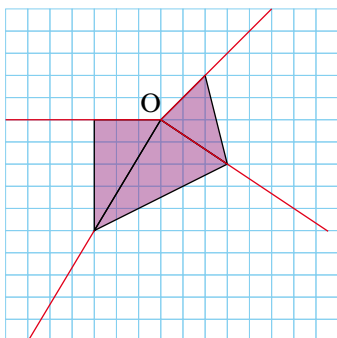


**b** Enlargement scale factor 5

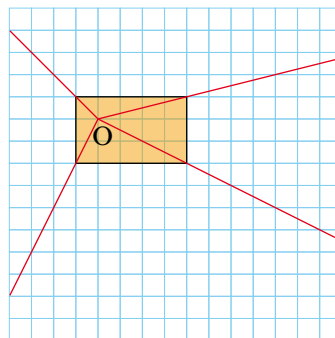


- 3** Copy these diagrams and enlarge each object by the scale factor shown. The centre of enlargement is marked O.

**a** Enlargement scale factor 2



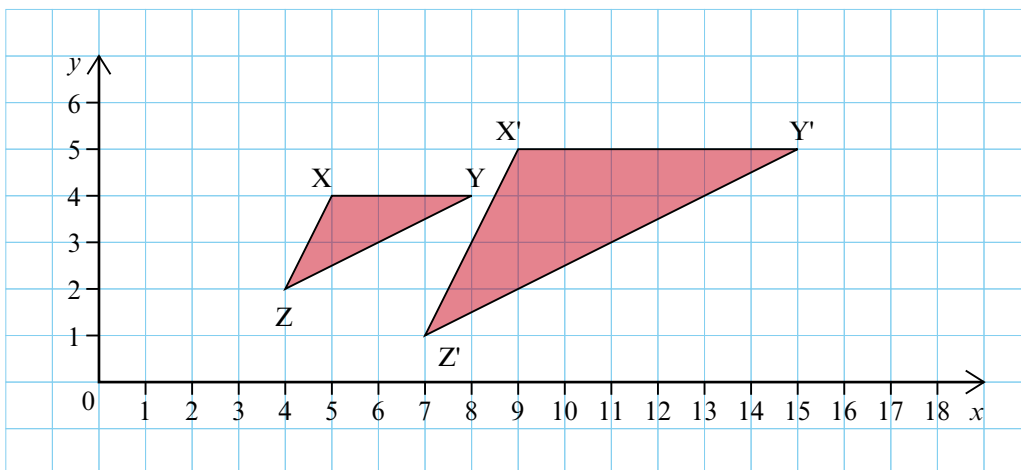
**b** Enlargement scale factor 2



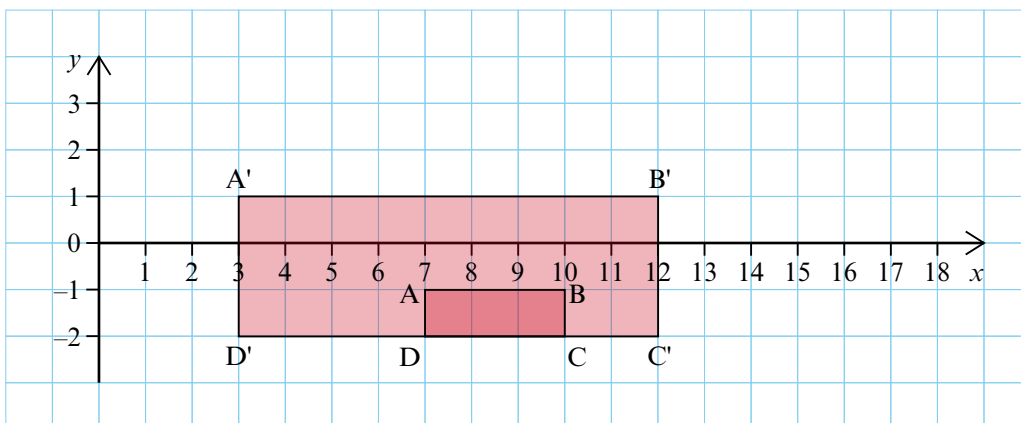
- 4** An object and its image are shown on each of the axes.

- What are the coordinates of the centre of each enlargement?
- What is the scale factor of each enlargement?

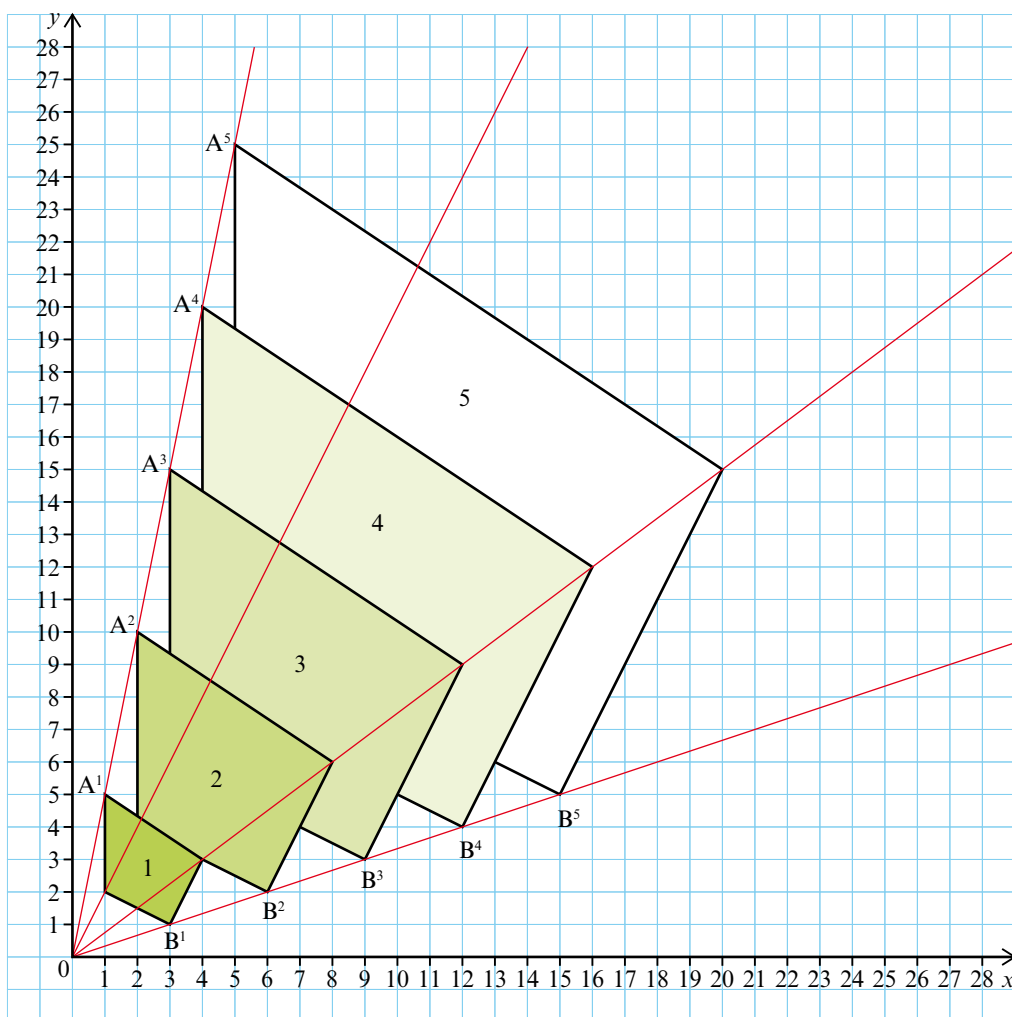
**a**



**b**



- 5** The diagram below shows an object 1 and several enlargements. Image 2 is an enlargement of 1 by scale factor 2. Image 3 is an enlargement of 1 by scale factor 3 etc. The centre of enlargement  $O$  is at the origin.



- What are the coordinates of  $A^1$ ,  $A^2$ ,  $A^3$ ,  $A^4$  and  $A^5$ ?
- Predict the coordinates of  $A^6$  and  $A^{10}$ . What are the coordinates of  $A^n$ ?
- What are the coordinates of  $B^1$ ,  $B^2$ ,  $B^3$ ,  $B^4$  and  $B^5$ ?
- Predict the coordinates of  $B^6$  and  $B^{10}$ . What are the coordinates of  $B^n$ ?
- An image of object 1 has coordinates (15, 75) for the A vertex. What is the scale factor of the enlargement?
- What do you notice about the length of a side in the object compared to the corresponding sides of the images?
- What do you notice about corresponding angles in object 1 and the images?