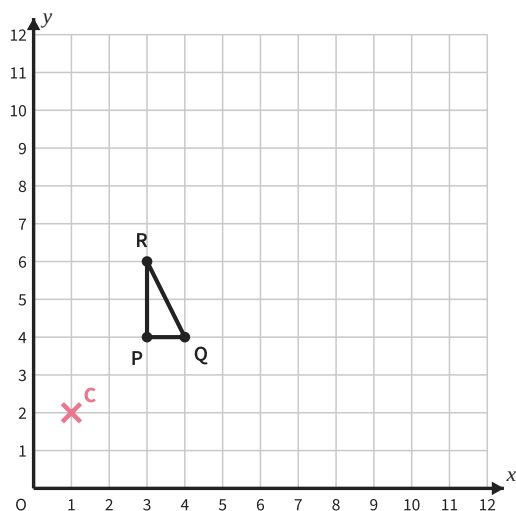


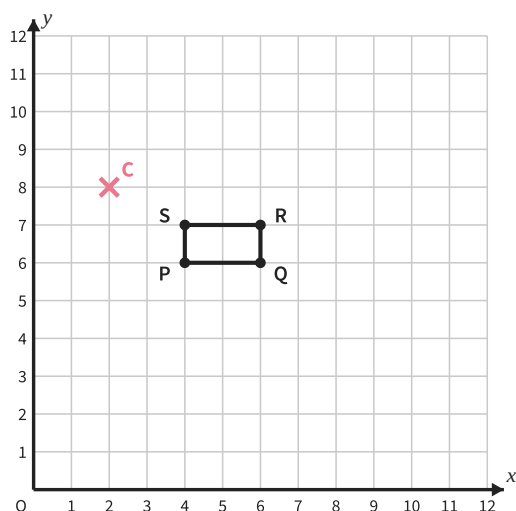
Enlargement: journeys from the centre



1

Enlarge the shape by scale factor 2 about the centre C (1, 2).

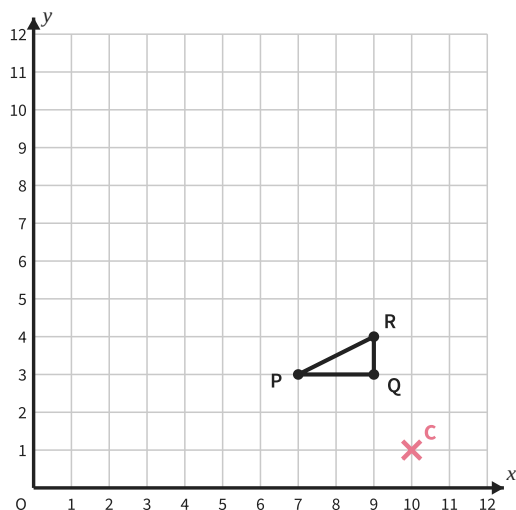
Vertex	Journey from C	Journey $\times 2$	Image vertex
P (3, 4)	right 2, up 2	right 4, up 4	P' (5, 6)
Q (4, 4)	right 3, up 2		
R (3, 6)	right 2, up 4		



2

Enlarge the shape by scale factor 2 about the centre C (2, 8).

Vertex	Journey from C	Journey $\times 2$	Image vertex
P (4, 6)	right 2, down 2		
Q (6, 6)	right 4, down 2		
R (6, 7)	right 4, down 1		
S (4, 7)	right 2, down 1		

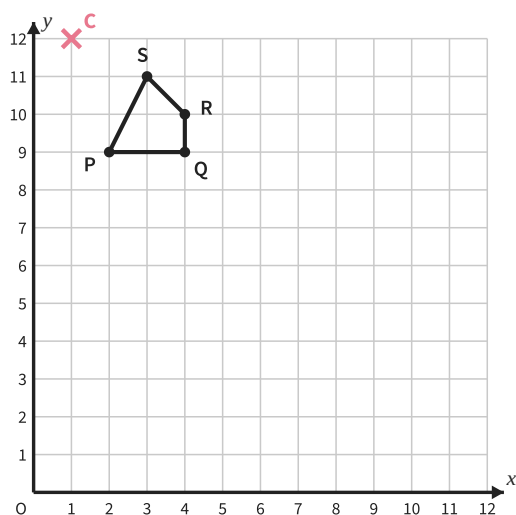


3

Enlarge the shape by scale factor 3 about the centre C (10, 1).

Vertex	Journey from C	Journey $\times 3$	Image vertex
P (7, 3)	left 3, up 2		
Q (9, 3)	left 1, up 2		
R (9, 4)	left 1, up 3		

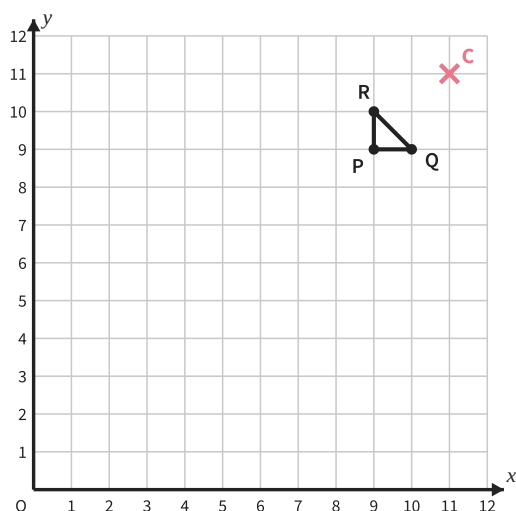
Enlargement: journeys from the centre



4

Enlarge the shape by scale factor 3 about the centre C (1, 12).

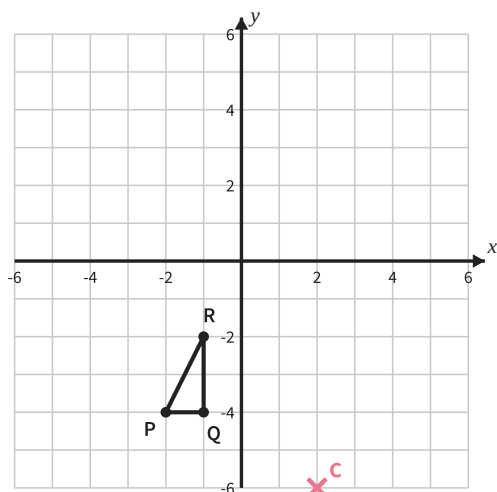
Vertex	Journey from C	Journey $\times 3$	Image vertex
P (2, 9)	right 1, down 3		
Q (4, 9)	right 3, down 3		
R (4, 10)	right 3, down 2		
S (3, 11)	right 2, down 1		



5

Enlarge the shape by scale factor 4 about the centre C (11, 11).

Vertex	Journey from C	Journey $\times 4$	Image vertex
P (9, 9)	left 2, down 2	left 8, down 8	P' (3, 3)
Q (10, 9)			
R (9, 10)			



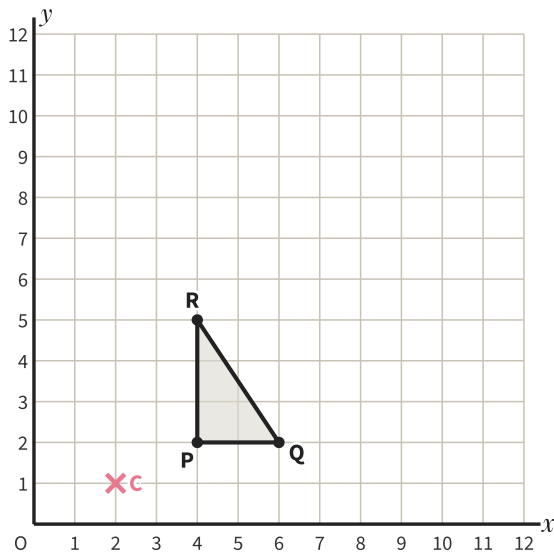
6

Enlarge the shape by scale factor 2 about the centre C (2, -6).
No table this time. Do the journeys in your head or draw your own.

Enlargement: journeys from the centre *further practice*

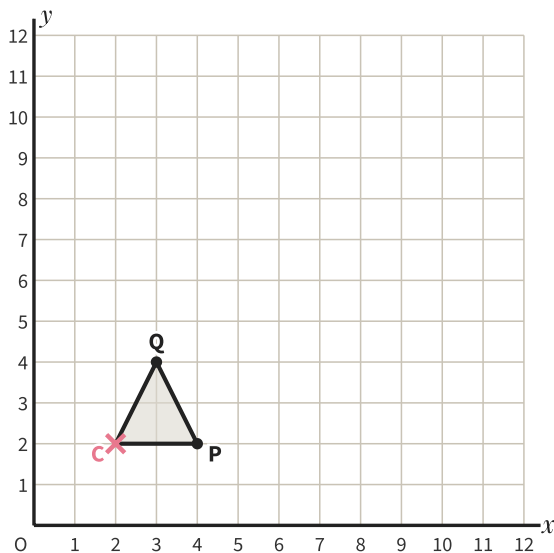


5



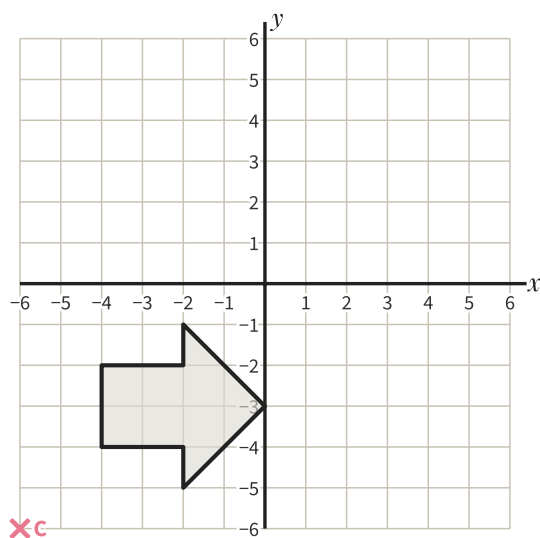
Enlarge the shape by scale factor 2 about the centre C (2, 1).

6



A tile designer enlarges this triangle by scale factor 3 about its corner C (2, 2). Draw the enlarged tile.

7

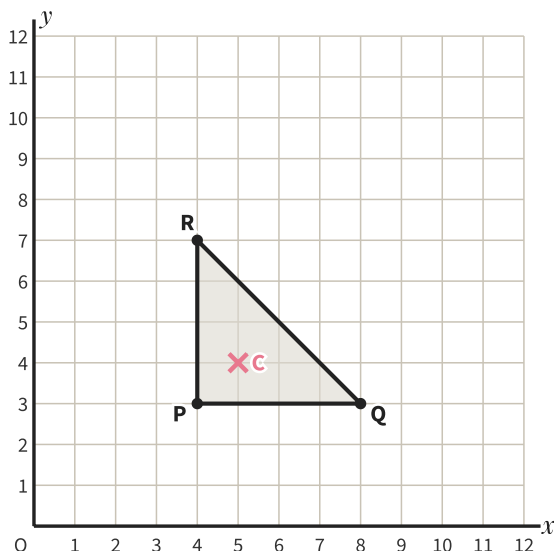


A sign maker enlarges this arrow by scale factor 2 about the centre C (-6, -6). Draw the enlarged arrow.

Enlargement: journeys from the centre *further practice*

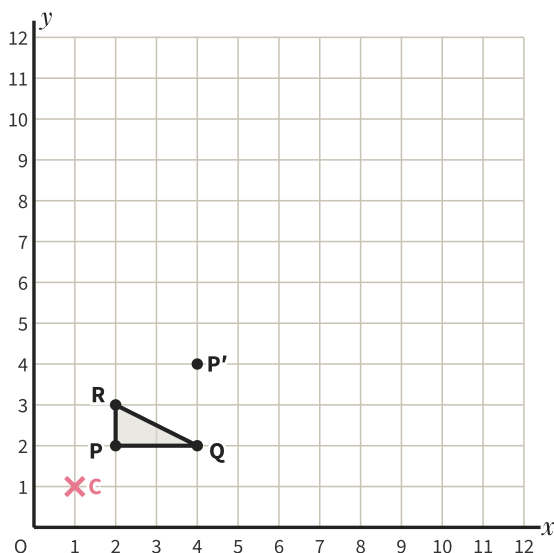


8



Enlarge the shape by scale factor 2 about the centre C (5, 4).
C is inside the shape.

9

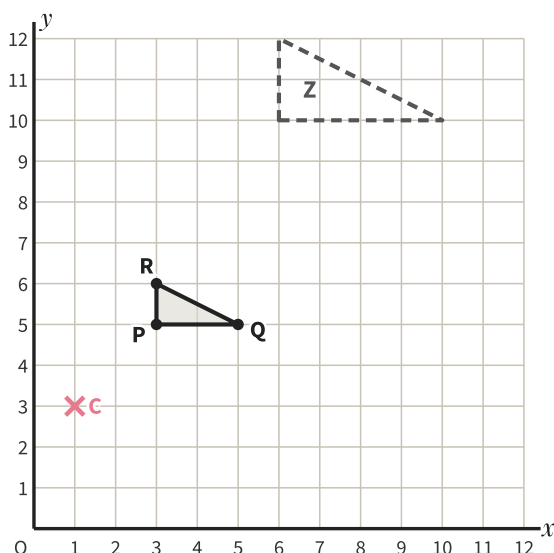


A projector at C enlarges the picture PQR. The corner P moves to P'.

- (a) What is the scale factor?
(b) Draw the rest of the enlarged picture.

(a) _____

10



Zara enlarges PQR by scale factor 2 about the centre C (1, 3).
Her answer is the dashed shape Z.
Explain Zara's mistake. Then draw the correct enlargement.
