

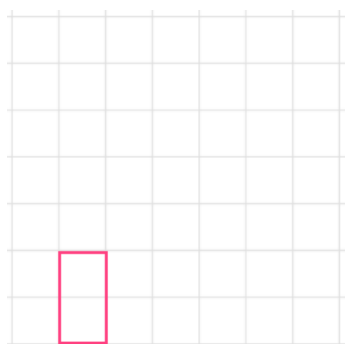
Enlargement - Worksheet

Skill

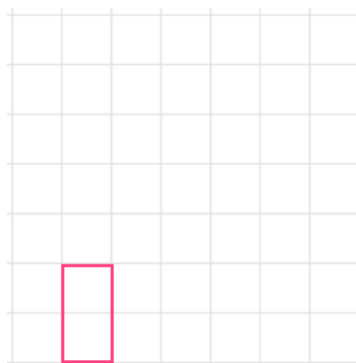
Group A - enlargement on a grid

Enlarge the shape:

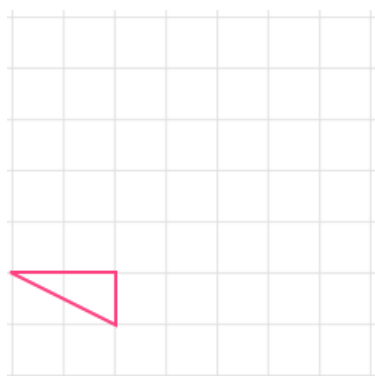
1) scale factor 2



2) scale factor 3



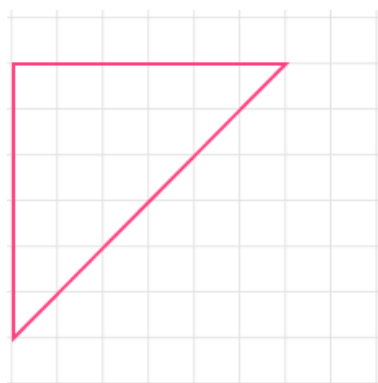
3) scale factor 2



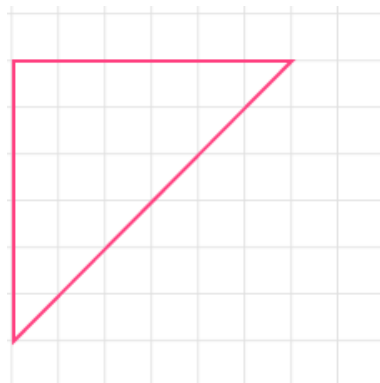
4) scale factor 3



5) scale factor $\frac{1}{2}$



6) scale factor $\frac{1}{3}$



Group B - with a centre of enlargement

Enlarge the shape about the point:

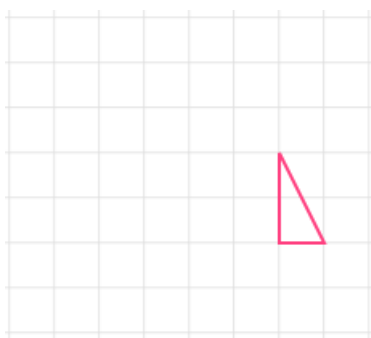
1) scale factor 2



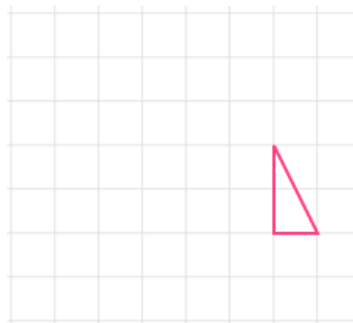
2) scale factor 3



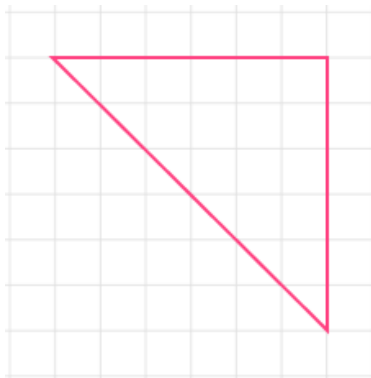
3) scale factor 2



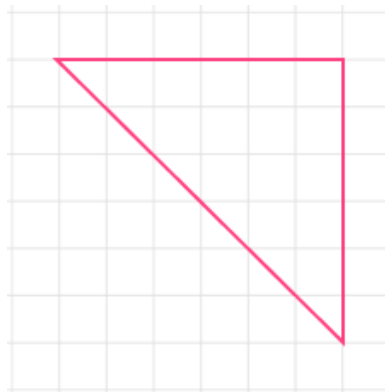
4) scale factor 3



5) scale factor $\frac{1}{2}$



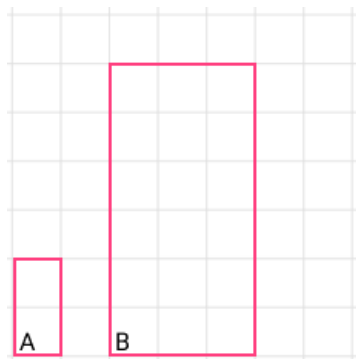
6) scale factor $\frac{1}{3}$



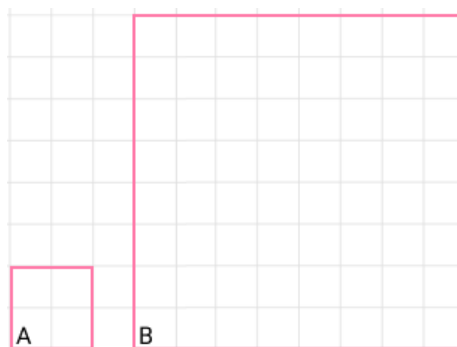
Group C - calculate the scale factor

Calculate the scale factor of the enlargement from shape A to shape B.

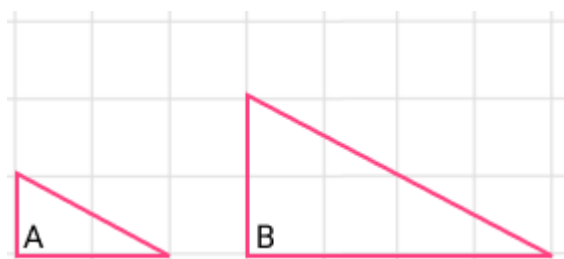
1)



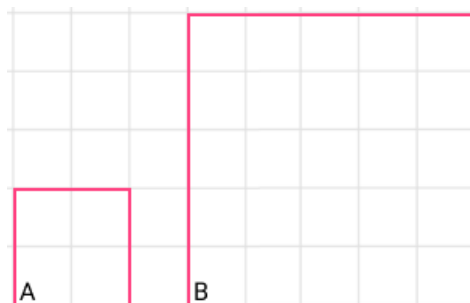
2)



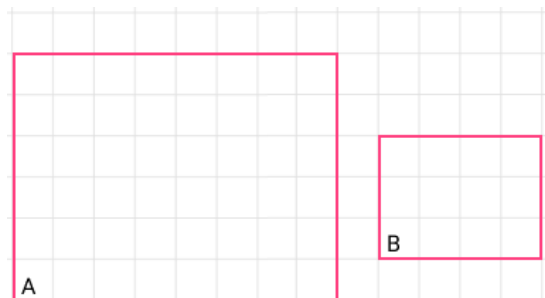
3)



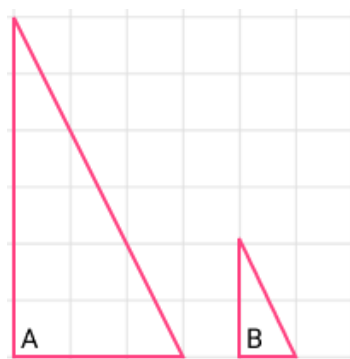
4)



5)



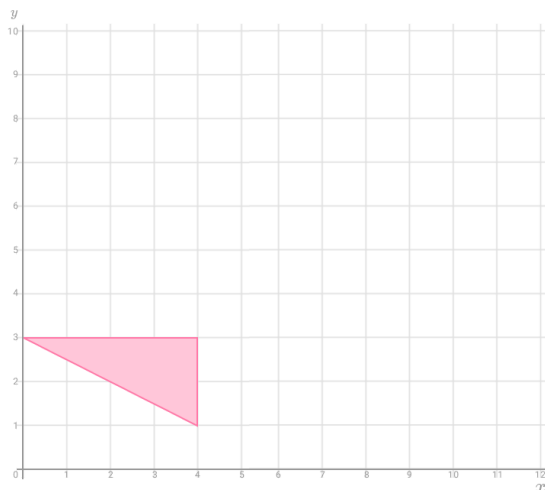
6)



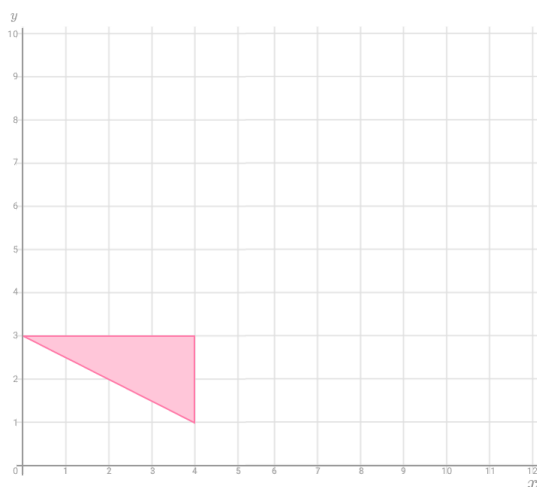
Enlargement - Worksheet

Applied

- 1) a) Enlarge the shaded shape by scale factor 2 about O.

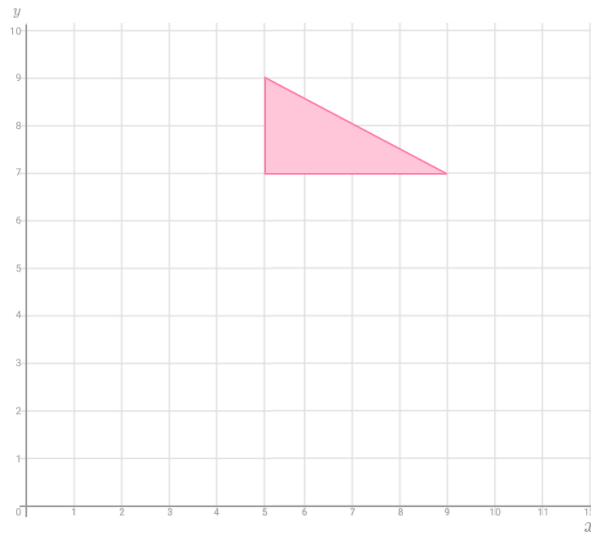


- b) Enlarge the shaded shape by scale factor 3 about O.



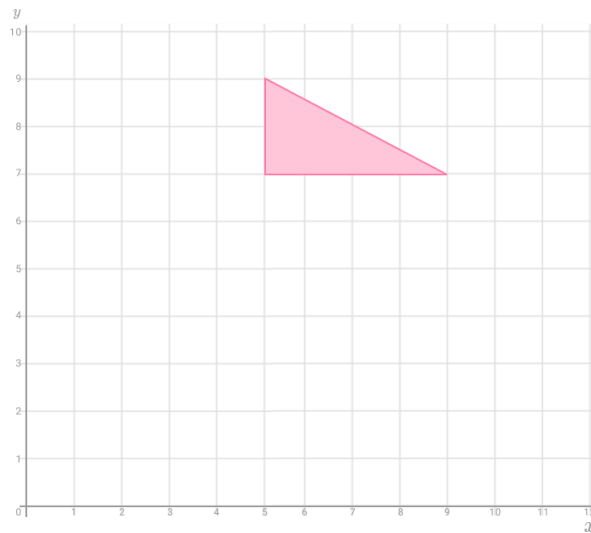
2) a)

Enlarge the shaded shape by scale factor 2 about (9,9).



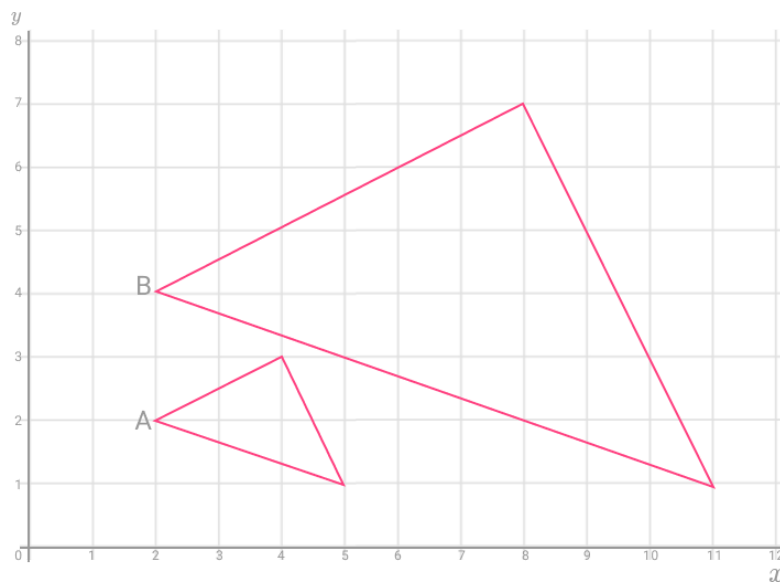
b)

Enlarge the shaded shape by scale factor $\frac{1}{2}$ about (9,9).



3) a)

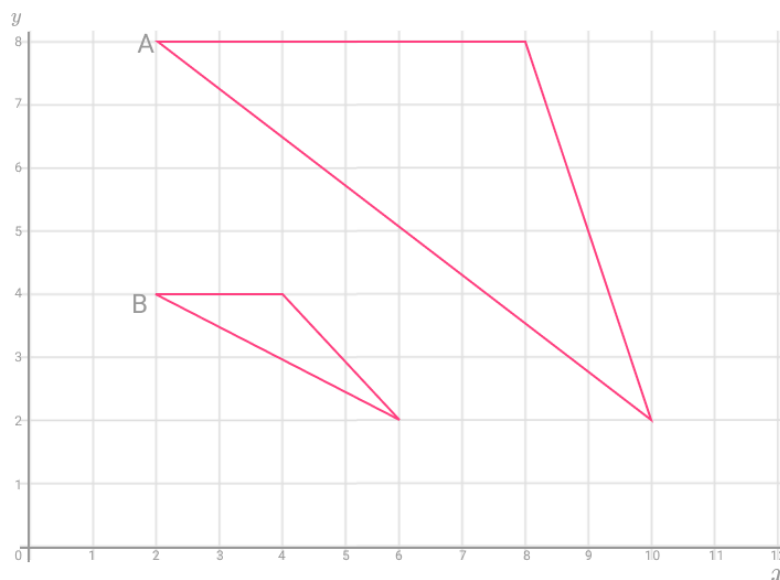
Shape A has been enlarged to make shape B.



Find the scale factor and the coordinates of the centre of enlargement.

b)

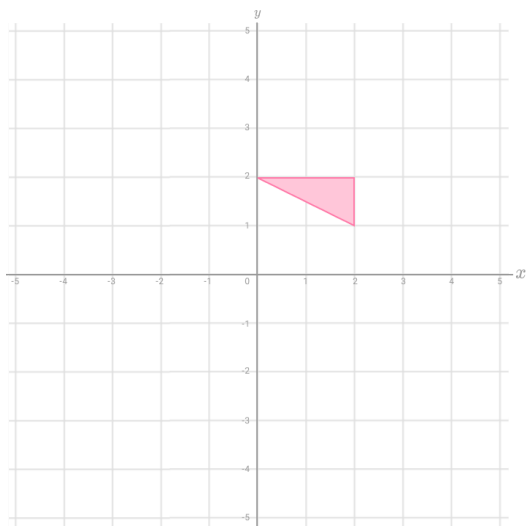
Shape A has been enlarged to make shape B.



Find the scale factor and the coordinates of the centre of enlargement.

4) a)

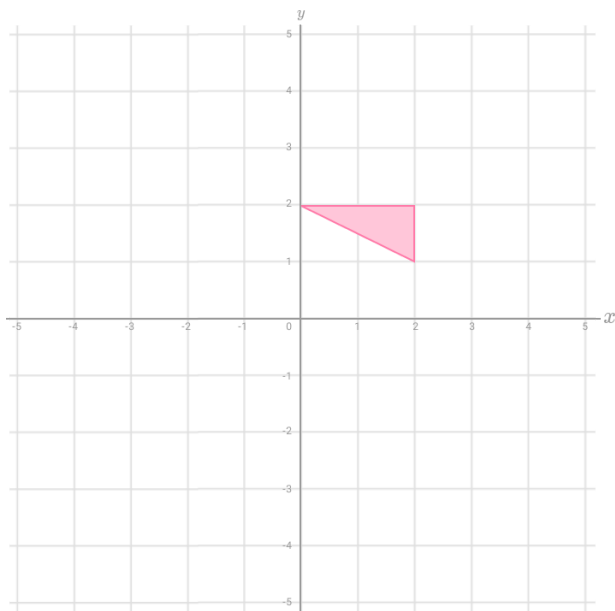
HIGHER



Enlarge the shaded shape by scale factor -2 about O.

b)

HIGHER

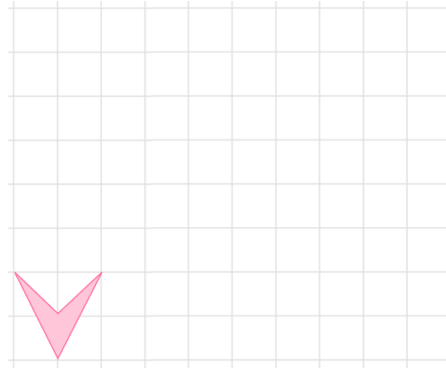


Enlarge the shaded shape by scale factor -1 about O.

Enlargement - Exam Questions

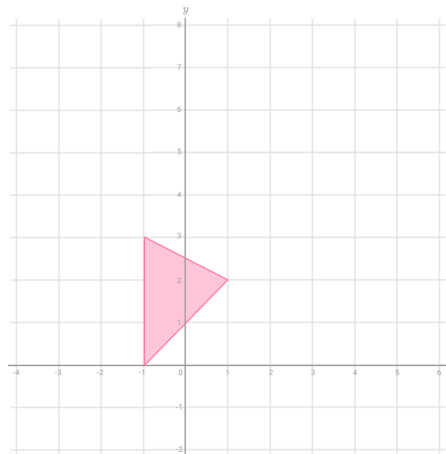
- 1) On the grid, draw an enlargement of the shape with a scale factor 3.

(2 marks)



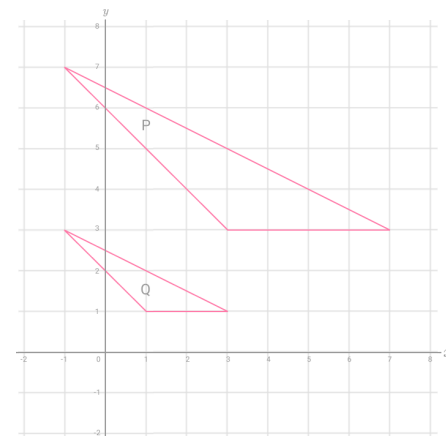
- 2) On the grid, draw an enlargement of the shape with a scale factor 3 centre $(0, -1)$

(2 marks)

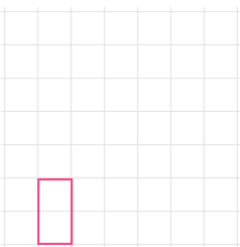
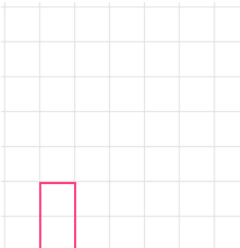
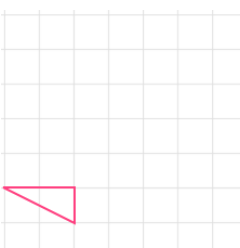
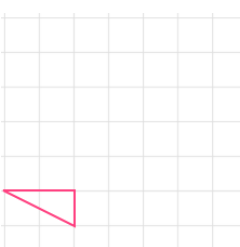
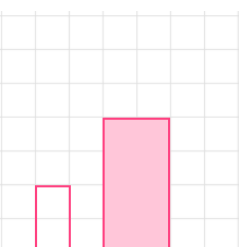
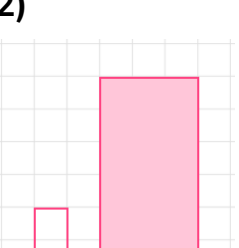
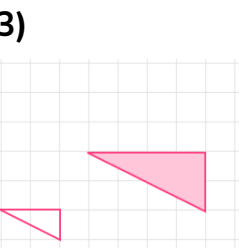
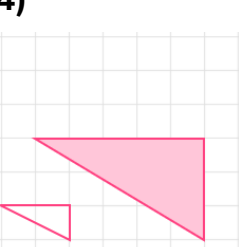


- 3) Describe fully the single transformation which maps shape P onto Shape Q.

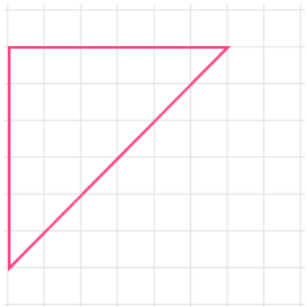
(3 marks)



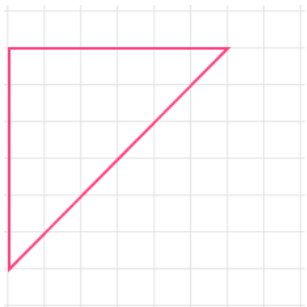
Enlargement - Answers

	Question	Answer
Group A	Skill Questions	
	<p>Enlarge the shape:</p> <p>1) scale factor 2</p>  <p>2) scale factor 3</p>  <p>3) scale factor 2</p>  <p>4) scale factor 3</p> 	<p>1)</p>  <p>2)</p>  <p>3)</p>  <p>4)</p> 

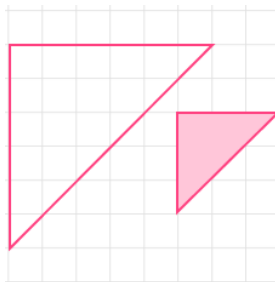
5) scale factor $\frac{1}{2}$



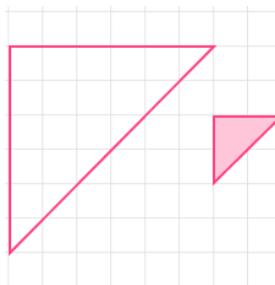
6) scale factor $\frac{1}{3}$



5)



6)



Group B

Enlarge the shape about the point:

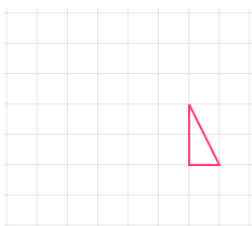
1) scale factor 2



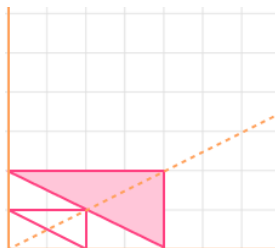
2) scale factor 3



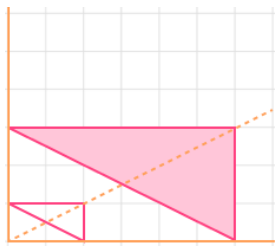
3) scale factor 2



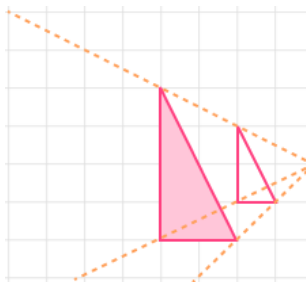
1)



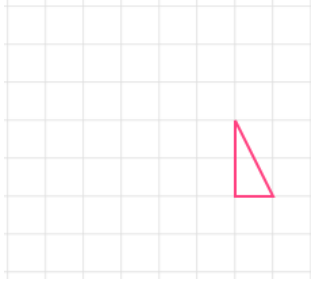
2)



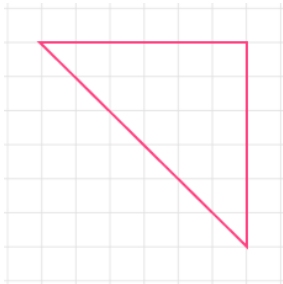
3)



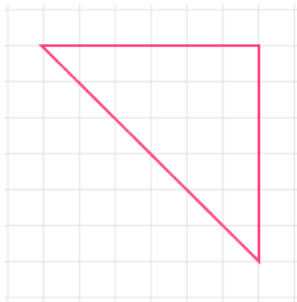
4) scale factor 3



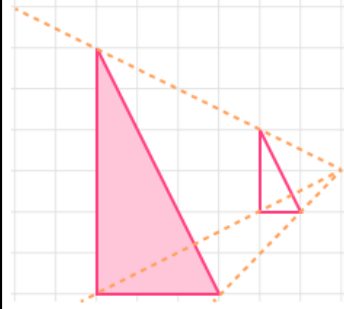
5) scale factor $\frac{1}{2}$



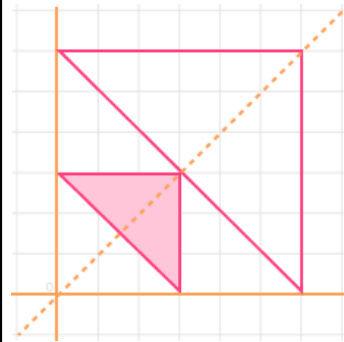
6) scale factor $\frac{1}{3}$



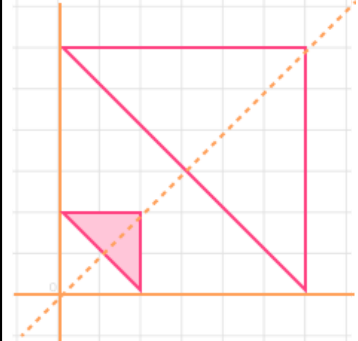
4)



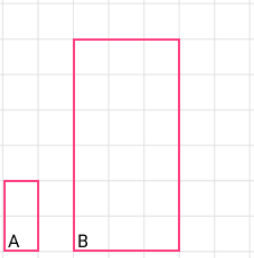
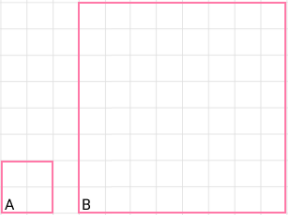
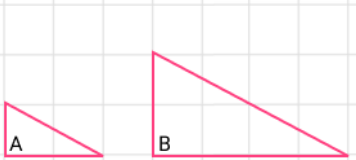
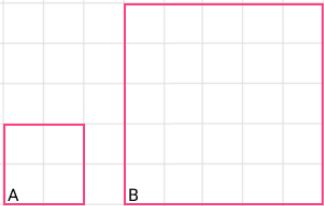
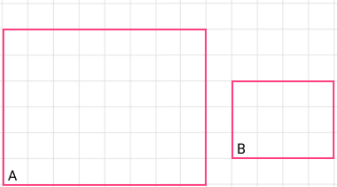
5)

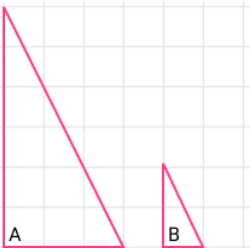


6)

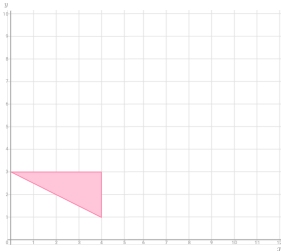
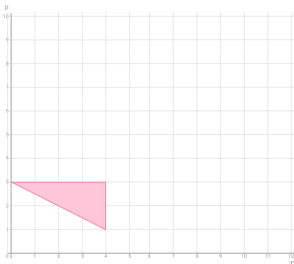
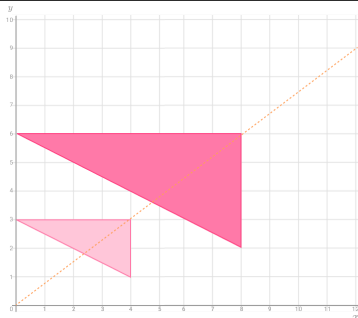
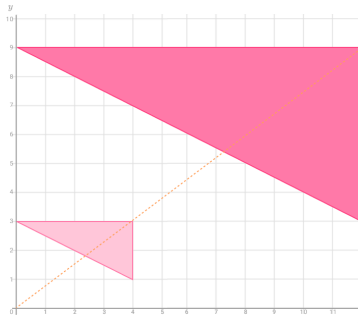
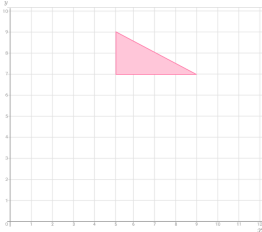
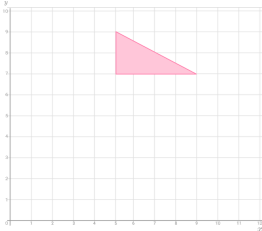
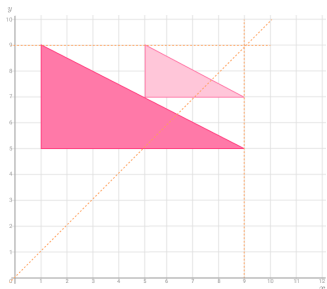
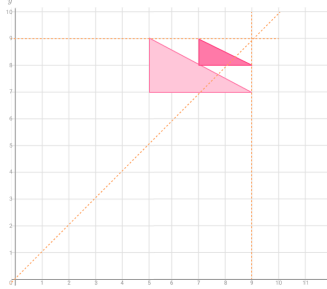


Enlargement - Answers

	Question	Answer
Group C	Skill Questions	
	<p>Rubric:</p> <p>1)</p>  <p>2)</p>  <p>3)</p>  <p>4)</p>  <p>5)</p> 	<p>1) Scale factor 3</p> <p>2) Scale factor 4</p> <p>3) Scale factor 2</p> <p>4) Scale factor $\frac{3}{2}$ or $1\frac{1}{2}$ or 1.5</p>

	<p>6)</p> 	<p>5) Scale factor $\frac{1}{2}$ or 0.5</p> <p>6) Scale factor $\frac{1}{3}$</p>
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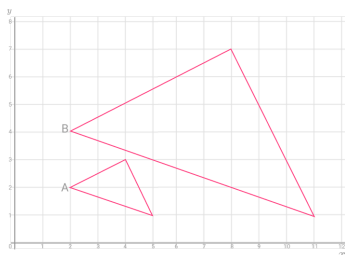
Enlargements - Answers

	Question	Answer
	Applied Questions	
1)	<p>a) Enlarge the shaded shape scale factor 2 about O.</p>  <p>Enlarge the shaded shape scale factor 3 about O.</p> <p>b)</p> 	<p>a)</p>  <p>b)</p> 
2)	<p>a) Enlarge the shaded shape scale factor 2 about (9,9).</p>  <p>Enlarge the shaded shape scale factor $\frac{1}{2}$ about (9,9).</p> <p>b)</p> 	<p>a)</p>  <p>b)</p> 

3)

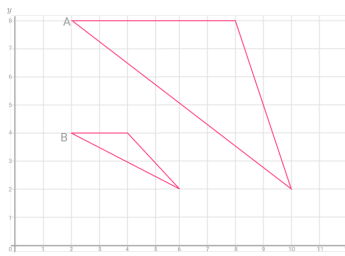
a) Shape A has been enlarged to make shape B.

Find the scale factor and the coordinates of the centre of enlargement.

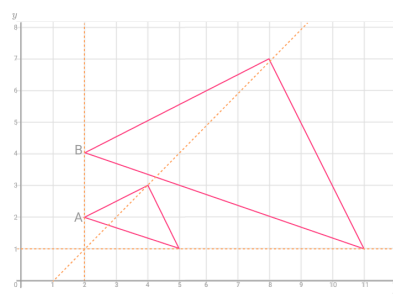


b) Shape A has been enlarged to make shape B.

Find the scale factor and the coordinates of the centre of enlargement.

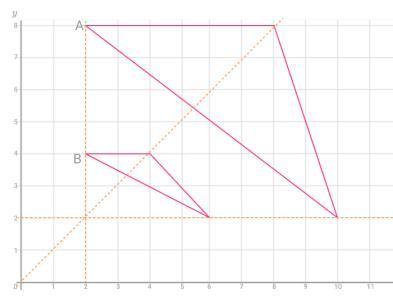


a)



Scale factor 3 about centre of enlargement (2,1)

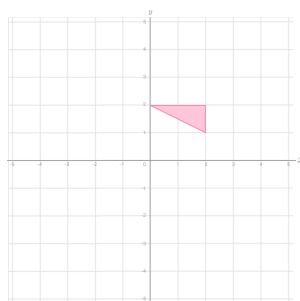
b)



Scale factor $\frac{1}{2}$ about centre of enlargement (2,2)

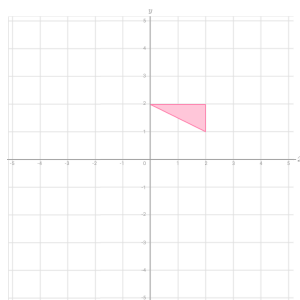
4)

a) HIGHER - Enlarge the shaded shape by scale factor -2 about O.

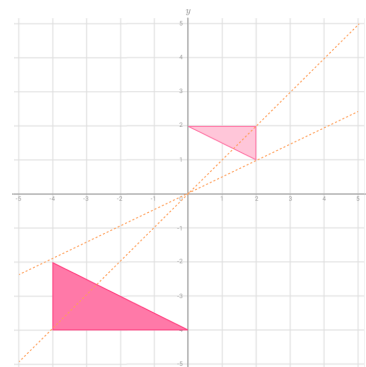


HIGHER - Enlarge the shaded shape by scale factor -1 about O.

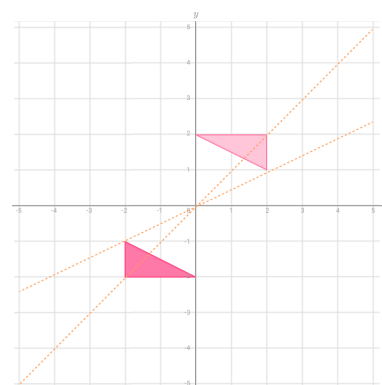
b)



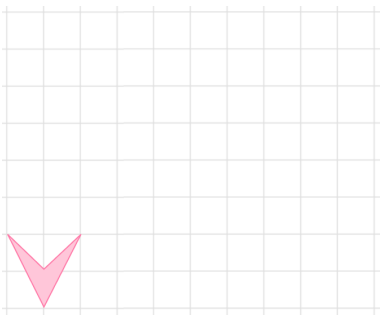
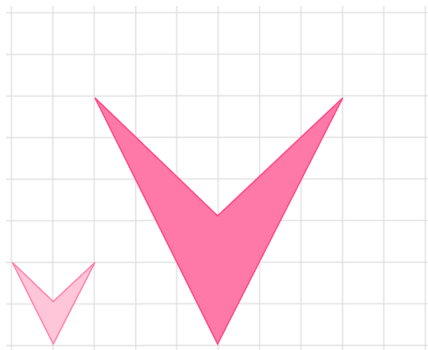
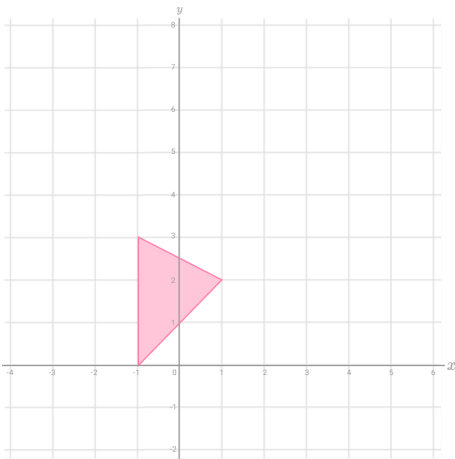
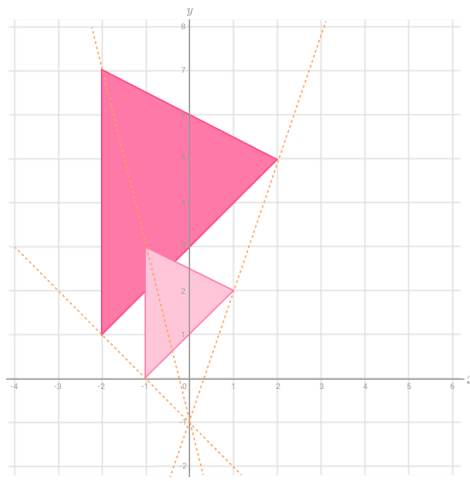
a)



b)

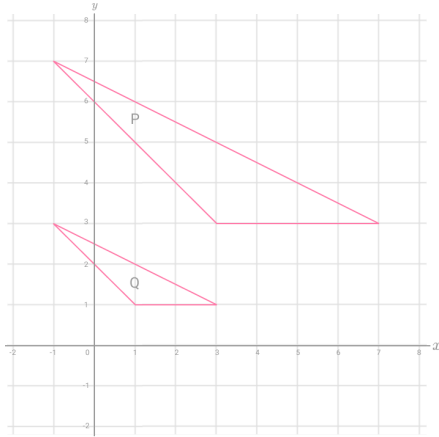
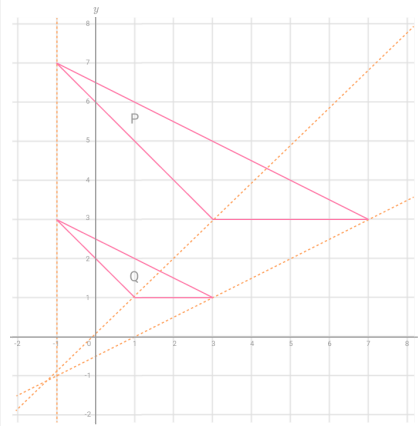


Enlargement - Mark Scheme

	Question	Answer	
	Exam Questions		
1)	<p>On the grid, draw an enlargement of the shape with a scale factor 3.</p> 	 <p>For 2 correct sides (1) For all 4 correct sides (1)</p>	(2)
2)	<p>On the grid, draw an enlargement of the shape with a scale factor 3 centre $(0, -1)$</p> 	 <p>For one correct vertex (1) For second correct vertex (1) For fully correct triangle (1)</p>	(3)

3)

Describe fully the single transformation which maps shape P onto Shape Q.

**(3)**

Enlargement **(1)**

Scale factor $\frac{1}{2}$ **(1)**

Centre of enlargement $(-1, -1)$ **(1)**

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