

Delta 2

Unit 5 Review (Non-Calculator)

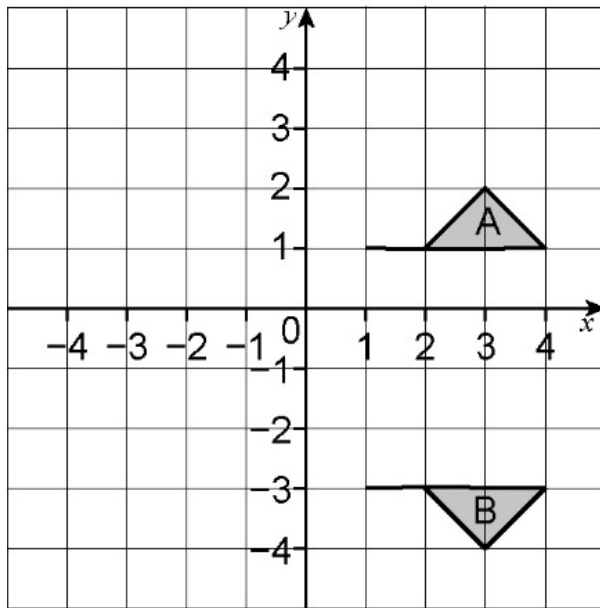
Transformations

How well did you do:

Transformations	Score = $\frac{\quad}{41}$	
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Topics/skills which need to be revisited:	Questions from the review	Further practice from Delta 2
- Fully describe a reflection - Perform a reflection in the line $y=x$ - Perform a translation	1a,4c 4a 5	- P119 Q3ii - P120 Q5 - P119 Q1
Perform a rotation (angle, direction, centre of rotation) on a shape	1b,4b	P120 Q7
Enlarge a shape by a positive integer scale factor, using the centre of enlargement	3	P121 Q1-3
- Enlarge a shape by a positive fractional scale factor, using the centre of enlargement - Enlarge a shape by a negative integer scale factor, using the centre of enlargement - Understand that translations, reflections and rotations produce <i>congruent</i> images. However, enlargements produce <i>similar</i> images.	7a 7b 6,7c	- P128 Q4c - P128 Q4b - Learn key points P102/108
Write two separate translations as one translation	5	P112 Q7
- Sketch a plane of symmetry on a 3D shape - Find the scale factor of enlargement of <i>length</i> in a wordy question - Find the scale factor of enlargement of <i>area</i> in a wordy question	2 8a 8b	- P122 Q2 - P122 Q5 - P122 Q6

1.



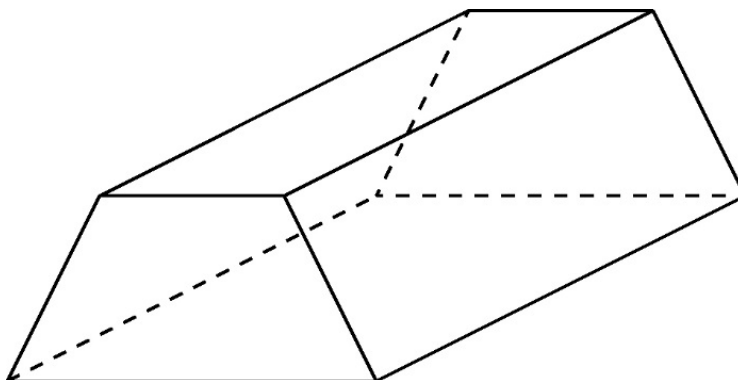
a Describe fully the transformation which maps A onto B.

..... (2 marks)

b Rotate shape A by 180° about the point (0, 0). Label your answer C.

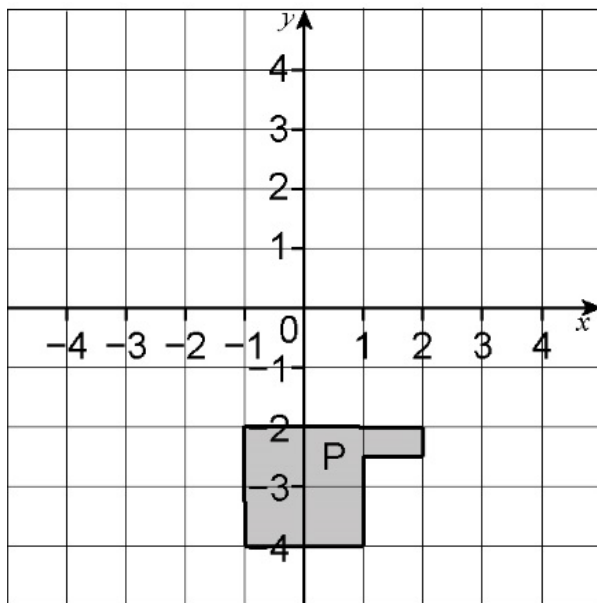
(2 marks)

2 Draw a plane of symmetry on this 3D shape.



(2 marks)

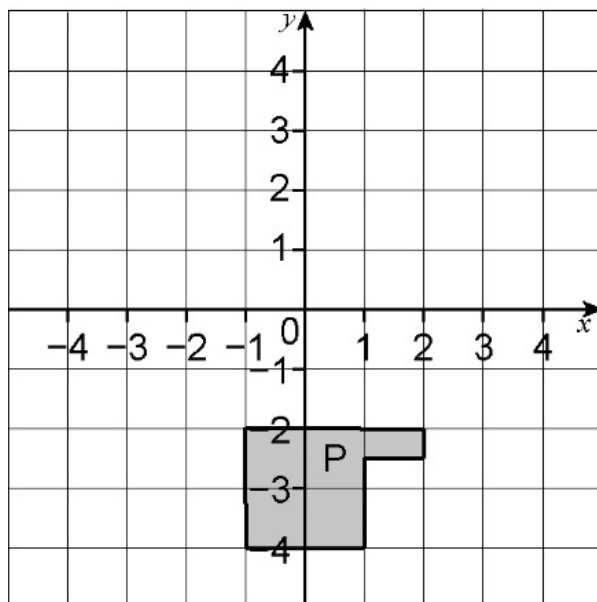
3



Enlarge shape P with the scale factor 2 and the centre of enlargement (2, -4)

(3 marks)

4.



a Reflect shape P in the line $y = x$. Label your new shape Q. (3 marks)

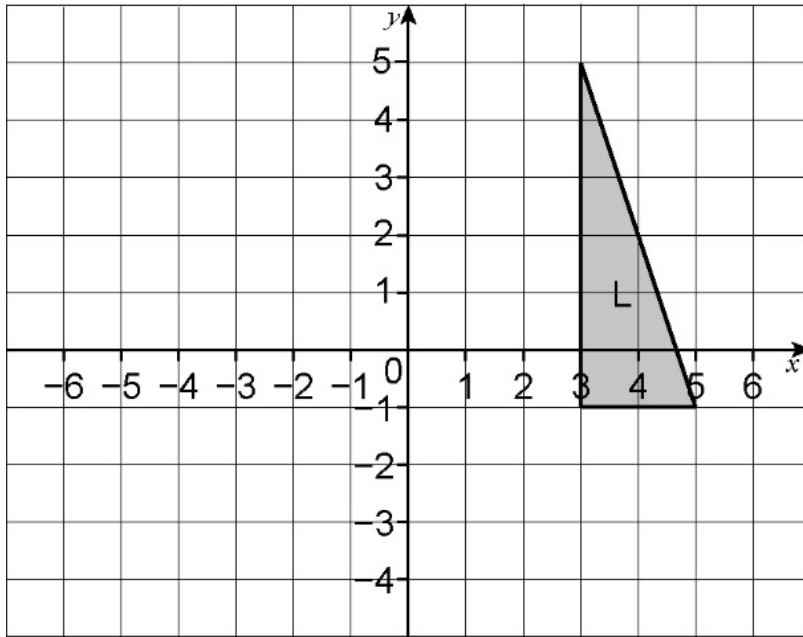
b Rotate shape Q by 90° clockwise about the point $(-1, -1)$. Label this shape R. (3 marks)

c What **single** transformation will map the original shape P onto shape R?

.....

(2 marks)

5.



Translate shape L with the vector $\begin{pmatrix} -7 \\ -2 \end{pmatrix}$. Label the new shape M. (2 marks)

Translate shape M with the vector $\begin{pmatrix} 4 \\ 3 \end{pmatrix}$. Label the new shape N. (2 marks)

What **single** transformation will map the shape N onto the original shape L? Describe it fully.

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.....

(3 marks)

6 Fill in the gaps in the following sentences, using words from below.

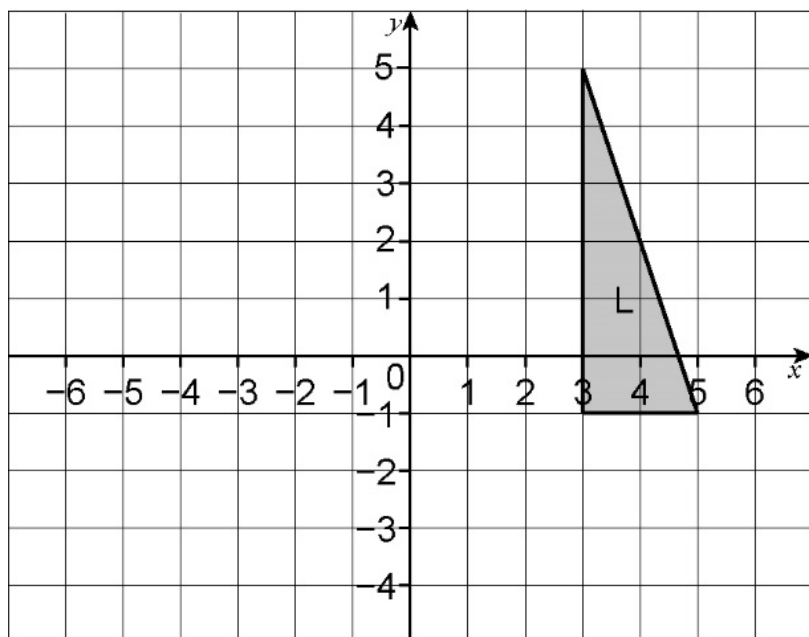
angles similar congruent side lengths

a After translations, rotations and reflections the image shape is to the original shape, with and remaining the same.

(2 marks)

b After enlargements the image shape is to the original shape with remaining the same and changing. (2 marks)

7.



a Enlarge triangle L with scale factor $\frac{1}{3}$, centre (0, 2). Label your new shape M. **(3 marks)**

b Now enlarge shape M with scale factor -2 about centre (0, 2). Label this new shape N. **(3 marks)**

c What can you say about the triangles L, M and N?

.....
(1 mark)

8 A rectangular photograph with sides 4cm and 6 cm is to be enlarged by scale factor 10, to be used as a wall mural.

a Find perimeter of the enlarged photograph. How many times it is larger than the original?

.....
.....
..... **(3 marks)**

b Find area of the enlarged photograph. How many times it is larger than the original?

.....
.....

(3 marks)

[End of Review]