



Name: _____ **Date:** _____ **Score:** _____ / 31

- 1** The point A is at $(2, 5)$. It is translated by the vector $(3, -2)$, that is 3 to the right and 2 down.

Write down the coordinates of the image of A .

(1 mark)

Answer _____

- 2** The point P is at $(-1, 4)$. It is translated by the vector $(-3, -5)$, that is 3 to the left and 5 down.

Write down the coordinates of the image of P .

(1 mark)

Answer _____

- 3** Rhys says that a translation by the vector $(3, -2)$ moves a shape 3 to the left and 2 up.

Rhys is wrong. Describe the movement correctly.

(2 marks)

Answer _____

- 4** A point A at $(3, 2)$ is translated to A' at $(8, -1)$.

Write down the vector of the translation, in the form (a, b) .

(2 marks)

Answer _____

- 5** A triangle has vertices at $(2, 3)$, $(5, 3)$ and $(2, 7)$.

The triangle is translated by the vector $(4, -2)$, that is 4 units to the right and 2 units down.

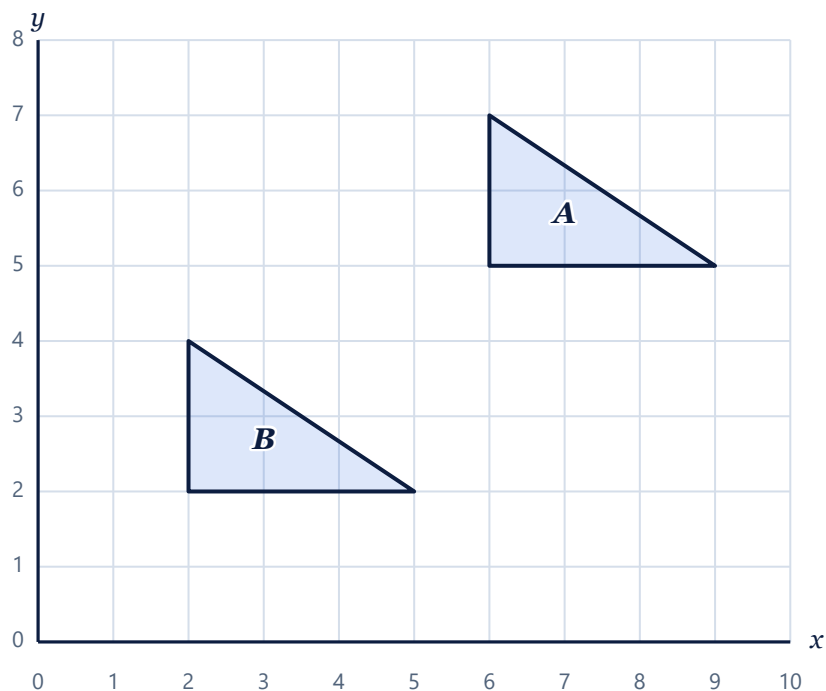
Write down the coordinates of the vertices of the image.

(2 marks)

Answer _____

- 6 Triangle B is a translation of triangle A .

Write down the vector of the translation that maps triangle A onto triangle B .



(2 marks)

Answer _____

- 7 Triangle P has vertices at $(1, 1)$, $(4, 1)$ and $(1, 3)$. It is translated by the vector $(-2, 3)$ to give triangle Q .

- Write down the coordinates of the vertices of triangle Q .
- Write down the vector that translates triangle Q back to triangle P .

(3 marks)

Answer _____

- 8 Square $ABCD$ has vertices $A(0, 0)$, $B(2, 0)$, $C(2, 2)$ and $D(0, 2)$. The square is translated so that the image of A is at $(-3, 4)$.

- Write down the vector of the translation.
- Work out the coordinates of the image of C .

(3 marks)

Answer _____

- 9** Triangle A has vertices at $(1, 1)$, $(3, 1)$ and $(1, 4)$.
Triangle B has vertices at $(5, -1)$, $(7, -1)$ and $(5, 2)$.

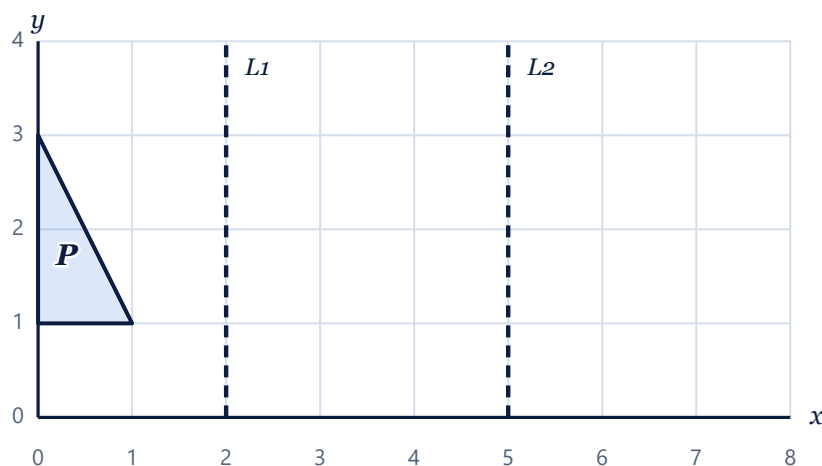
Describe fully the single transformation that maps triangle A onto triangle B .

(2 marks)

Answer _____

- 10** Triangle P is reflected in the line L_1 ($x = 2$) to give triangle Q .
Triangle Q is then reflected in the line L_2 ($x = 5$) to give triangle R .

- On the grid, draw triangle Q and triangle R .
- Describe the single transformation that maps triangle P onto triangle R .



(3 marks)

Answer _____

- 11** A shape is translated by the vector $(2, 3)$ and then by the vector $(-5, 1)$.
- Write down the single vector that gives the same translation.
 - Write down the vector that moves the shape back to its starting position.

(3 marks)

Answer _____

- 12** Triangle A has vertices at $(2, 1)$, $(5, 1)$ and $(2, 3)$.

Triangle A is reflected in the y -axis to give triangle B .

- Write down the coordinates of the vertices of triangle B .
- Triangle C has vertices at $(-1, -2)$, $(-4, -2)$ and $(-1, 0)$. Find the vector of the translation that maps triangle B onto triangle C .

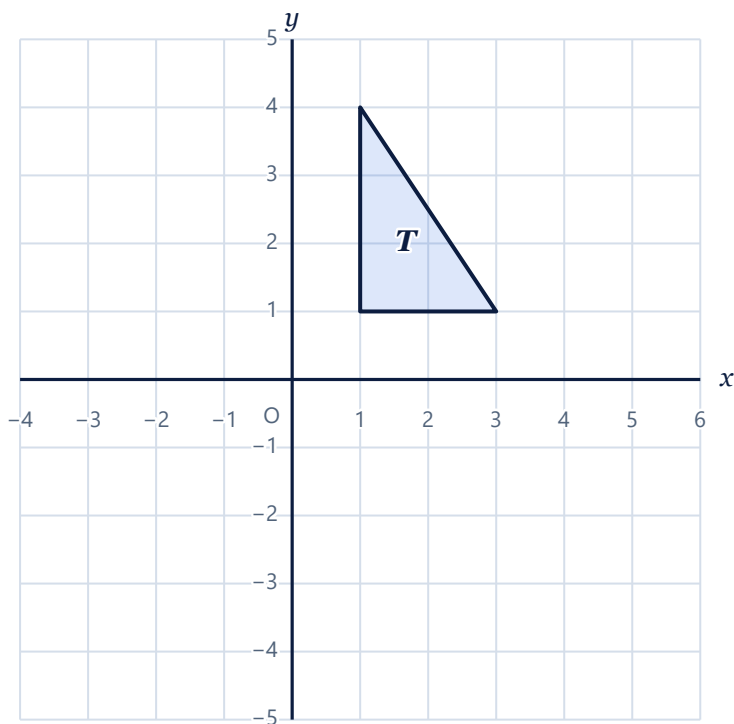
(3 marks)

Answer _____

- 13** Triangle T is rotated 180° about the origin O to give triangle T_1 .

Triangle T_1 is then translated by the vector $(4, 0)$ to give triangle T_2 .

- On the grid, draw triangle T_1 and triangle T_2 .
- Describe fully the single transformation that maps triangle T onto triangle T_2 .



(4 marks)

Answer _____

End of questions | Total 31 marks