

Enlargement with a negative scale factor

Grade 6 | Higher | 11 questions, 26 marks

GCSE Maths topic practice



Scan for the solutions

Name: _____ Date: _____ Score: _____ / 26

- 1 A point is enlarged by scale factor -2 , centre $(0, 0)$. Write down the coordinates of the image of

- a. the point $P(3, 2)$,
- b. the point $Q(-1, 4)$.

(2 marks)

Answer _____

- 2 Triangle P has vertices at $(2, 1)$, $(4, 1)$ and $(4, 2)$.

Triangle P is enlarged by scale factor -1 , centre $(0, 0)$, to give triangle Q.

Write down the coordinates of the vertices of triangle Q.

(2 marks)

Answer _____

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

Triangle A is enlarged by scale factor -2 , centre $(0, 0)$, to give triangle B.

Write down the coordinates of the vertices of triangle B.

(2 marks)

Answer _____

- 4 Triangle T has vertices at $(4, 2)$, $(6, 2)$ and $(4, 6)$.

Triangle T is enlarged by scale factor $-\frac{1}{2}$, centre $(0, 0)$, to give triangle U.

Write down the coordinates of the vertices of triangle U.

(2 marks)

Answer _____

- 5 Triangle M has vertices at $(2, 1)$, $(3, 1)$ and $(2, 3)$.

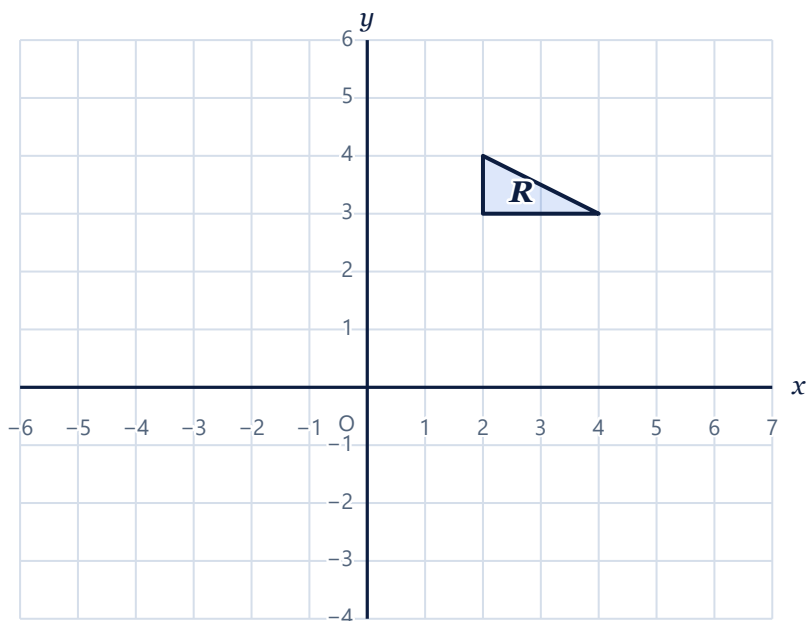
Triangle M is enlarged by scale factor -3 , centre $(1, 0)$, to give triangle N.

Work out the coordinates of the vertices of triangle N.

(2 marks)

Answer _____

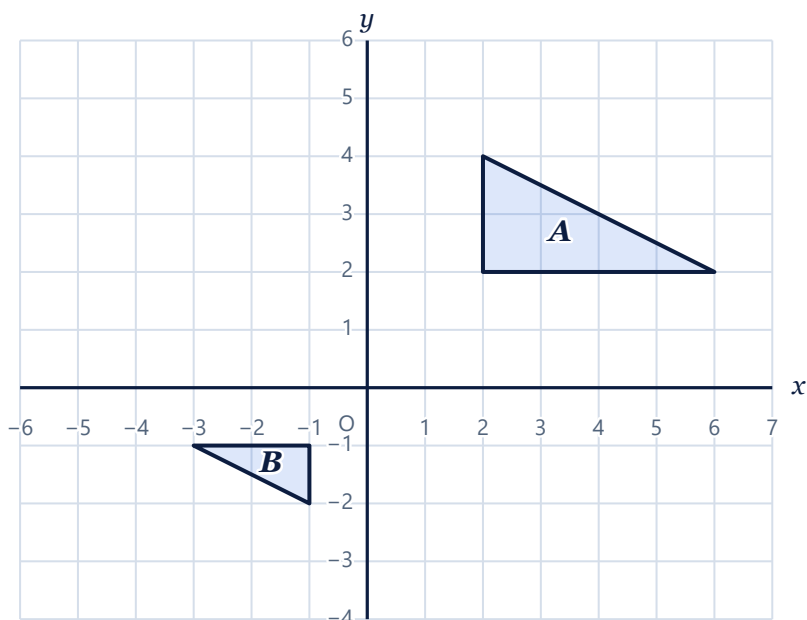
- 6 Triangle R is drawn on the grid with vertices at (2, 3), (4, 3) and (2, 4).
On the grid, enlarge triangle R by scale factor -2 , centre (1, 2).



(2 marks)

Answer _____

- 7 Triangle A has vertices at (2, 2), (6, 2) and (2, 4).
Triangle B has vertices at (-1, -1), (-3, -1) and (-1, -2).
Describe fully the single transformation that maps triangle A onto triangle B.



(2 marks)

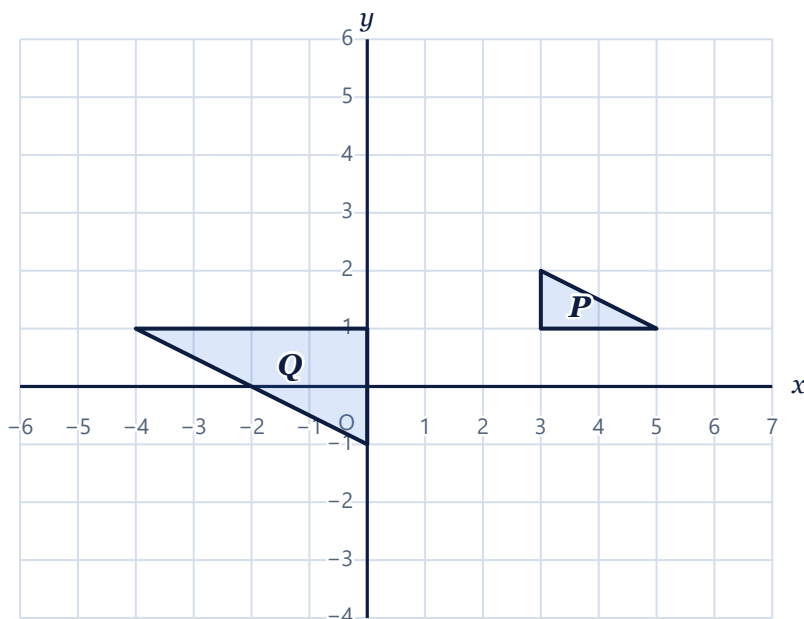
Answer _____

- 8 Triangle A has vertices $(2, 2)$, $(6, 2)$ and $(2, 4)$.
Triangle B has vertices $(-1, -1)$, $(-3, -1)$ and $(-1, -2)$.
 B is an enlargement of A . Describe fully the enlargement.

(3 marks)

Answer _____

- 9 Triangle P has vertices at $(3, 1)$, $(5, 1)$ and $(3, 2)$.
Triangle Q has vertices at $(0, 1)$, $(-4, 1)$ and $(0, -1)$.
Describe fully the single transformation that maps triangle P onto triangle Q .

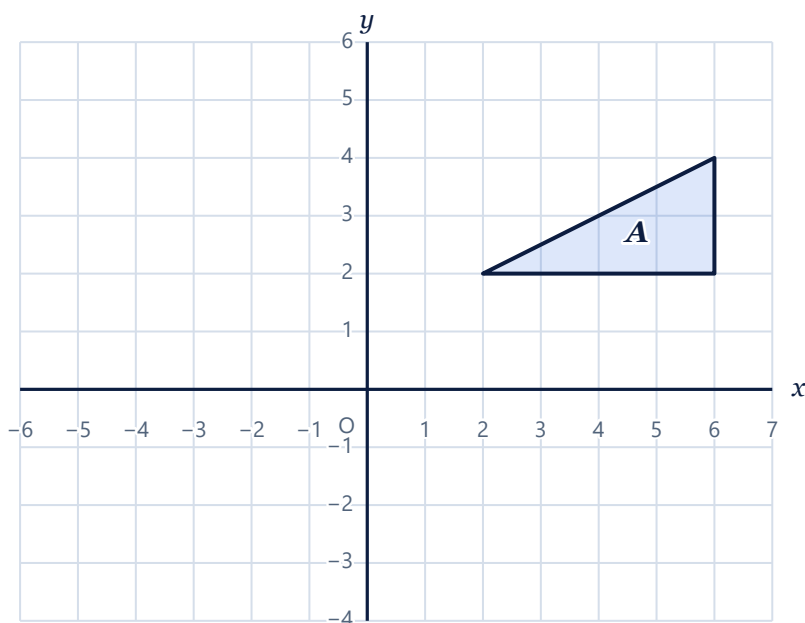


(3 marks)

Answer _____

10 Triangle A has vertices at (2, 2), (6, 2) and (6, 4).

- a. Triangle A is enlarged by scale factor $-\frac{1}{2}$, centre (0, 0), to give triangle B. Write down the coordinates of the vertices of triangle B.
- b. Describe fully the single transformation that maps triangle B back onto triangle A.



(3 marks)

Answer _____

11 Triangle A has vertices (3, 2), (4, 2) and (3, 3).

Triangle B has vertices (−1, −2), (−4, −2) and (−1, −5).

B is an enlargement of A. Describe fully the enlargement.

(3 marks)

Answer _____

End of questions | Total 26 marks