Test - Four-quadrant coordinates and transformations

Year: Year 6 · Duration: 40 minutes · /20

Name:	Date:	**Mark:** /20

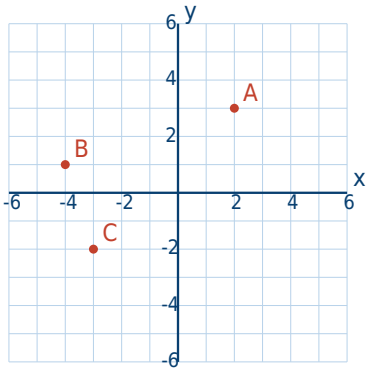
Question	1	2	3	4	5	Total
marks	3	4	4	4	5	**20**
Mark						

Show your working.

Question 1 (3 marks)

Question 1 – Coordinates

Look at the points on the grid.



a. Write the coordinates of A, B and C.
b. In which quadrant is C?
c. Three corners of a rectangle are (2, 3), (2, −2) and (−3, −2). Write the fourth corner.

Question 2 (4 marks)

Question 2 – Translations

a. Translate the point (4, −2) by 3 to the left and 5 up.
b. The point (−1, 3) is translated to (2, 1). Describe the translation.
c. Triangle ABC has corners A(0, 0), B(2, 0) and C(2, 3). It is translated 4 to the right and 2 down. Write the new corners.

Question 3 (4 marks)

Question 3 – Reflections

a. Reflect the point (5, −3) in the x-axis.
b. Reflect the point (−6, 2) in the y-axis.
c. A triangle has corners (1, 1), (4, 1) and (1, 3). It is reflected in the y-axis. Write the new corners.
d. Triangle with corners (2, 1), (5, 1), (2, 4) is reflected in the x-axis. Does the area change? Explain.

Question 4 (4 marks)

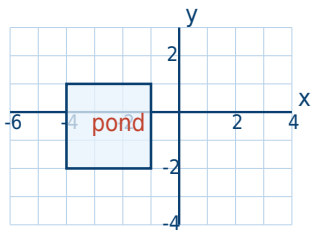
Question 4 – Distances and rectangles

a. Find the distance from (−5, 2) to (3, 2).
b. Find the distance from (4, −6) to (4, 1).
c. A rectangle has corners (−2, −1), (4, −1), (4, 3) and (−2, 3). Find its perimeter.
d. Find the area of the rectangle in part (c).

Question 5 (5 marks)

Question 5 – The garden plan

A garden is planned on a coordinate grid. One unit on the grid stands for 3 m. A pond has corners at P(−4, 1), Q(−1, 1), R(−1, −2) and S(−4, −2).



a. Describe the shape PQRS and work out its real perimeter in metres.
b. Work out the real area of the pond.
c. The pond is reflected in the y-axis to make a second pond. Write the corners of the second pond.
d. Is the new pond the same size as the first? How far apart are the nearest edges of the two ponds in metres?