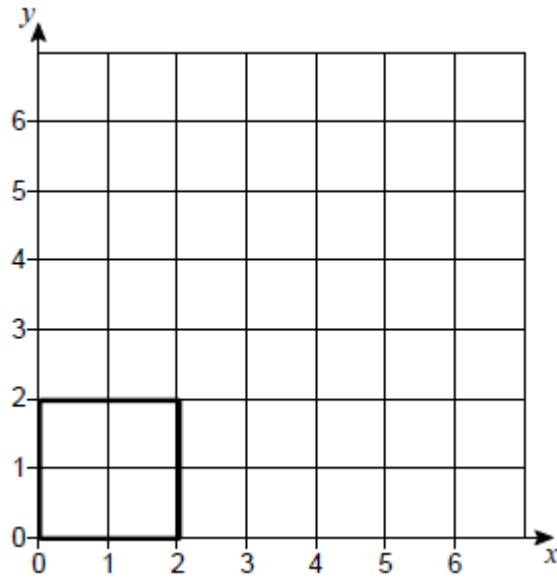**Q1.**

Square *OABC* is drawn on a centimetre grid.

O is (0, 0)   *A* is (2, 0)   *B* is (2, 2)   *C* is (0, 2)

(a)   *OABC* is translated by the vector $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$

Circle the number of invariant points on the perimeter of the square.

      0   1   2   4

(1)

(b)   *OABC* is enlarged, scale factor 2, centre (0, 0)

Circle the number of invariant points on the perimeter of the square.

      0   1   2   4

(1)

(c)   *OABC* is reflected in the line $y = x$

Circle the number of invariant points on the perimeter of the square.

0   1   2   4

(1)
(Total 3 marks)