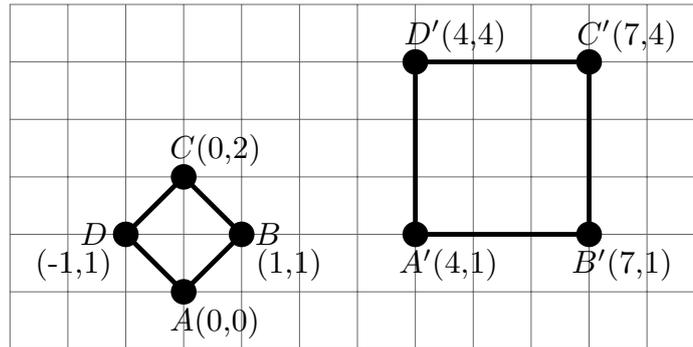


## 2005 Paper 12 Question 5

### Computer Graphics and Image Processing

- (a) Describe, in detail, an algorithm to clip a straight line against an axis-aligned rectangle. [10 marks]
- (b) Explain why homogeneous coordinates are used for handling geometric transformations. [3 marks]



- (c) Give a matrix, or a product of matrices, which will transform the square  $ABCD$  to the square  $A'B'C'D'$ . [4 marks]
- (d) Show what happens if the same transformation is applied to the square  $A'B'C'D'$ . [3 marks]