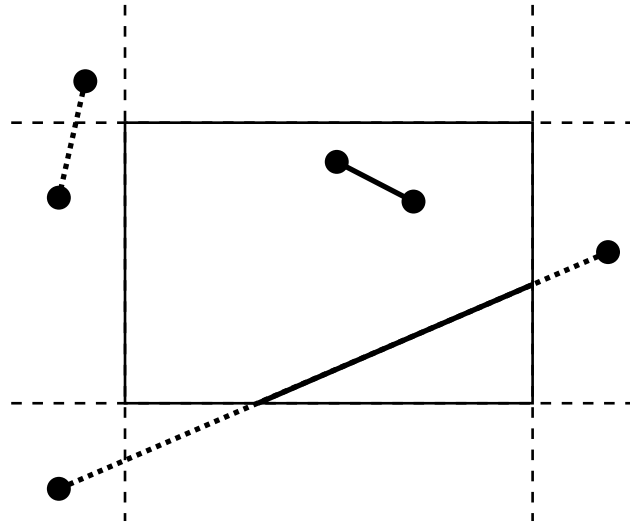


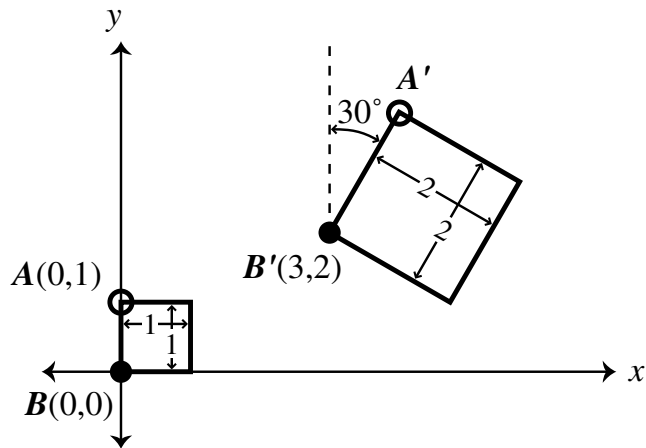
# 1998 Paper 12 Question 4

## Computer Graphics and Image Processing



Describe an algorithm for clipping a line against a rectangle. [9 marks]

Show that it works using the above three examples. [3 marks]



The above diagram shows a complicated 2D transformation applied to a unit square. The overall transformation can be described in terms of a number of simpler transformations. Describe each of these simple transformations and give a matrix representation of each using homogeneous coordinates. [6 marks]

Use the matrices from the previous part to find the  $(x, y)$  coordinates of point  $A'$ , the image of point  $A$  under the overall transformation. [2 marks]