

2007 Paper 12 Question 5

Computer Graphics and Image Processing

- (a) Describe, in detail, an algorithm that will draw a one-pixel wide outline of a circle of integer radius centred on the origin. [10 marks]
- (b) Describe the modifications required to your algorithm in part (a) to make it draw a filled circle. [3 marks]
- (c) Describe the modifications required to your algorithm in part (a) to make it draw the outline of a circle centred at arbitrary integer coordinates. [2 marks]
- (d) Describe the modifications required to your algorithm in part (c) to make it draw the outline of a circle centred at arbitrary non-integer coordinates and of non-integer radius. [5 marks]