

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

SECTION 5.4

Math 1090 Worksheet

FALL 2009

For practise only. Not to be submitted.

1. Determine the centre and radius of the circles with the following equations.
 - (a) $x^2 + y^2 + 10x - 4y - 7 = 0$
 - (b) $x^2 + y^2 - 2x - 5 = 0$
 - (c) $9x^2 + 9y^2 - 6x + 12y - 139 = 0$
2. Sketch the graph of the circle with the given equation *without* constructing a table of values.
 - (a) $x^2 + y^2 + 2x + 4y + 1 = 0$
 - (b) $4x^2 + 4y^2 - 20y + 9 = 0$