

► 2024 LCHL Paper 1 – Question 5

(a) The circle s has equation:

$$x^2 + y^2 + 4x - 6y + 5 = 0$$

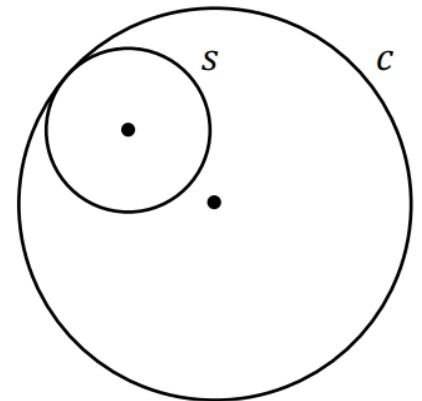
(i) Write down the centre and radius of the circle s .

Centre = (,)	Radius = _____
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(ii) The circle c has equation:

$$(x - 2)^2 + (y + 1)^2 = 72$$

Show that the circles s and c touch internally.



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(b) Another circle has its centre on the vertical line through the point $(9, 0)$.

The points $(7, 10)$ and $(12, 8)$ are on this circle.

Find the equation of this circle.

Note that your answer may contain non-integer values.

