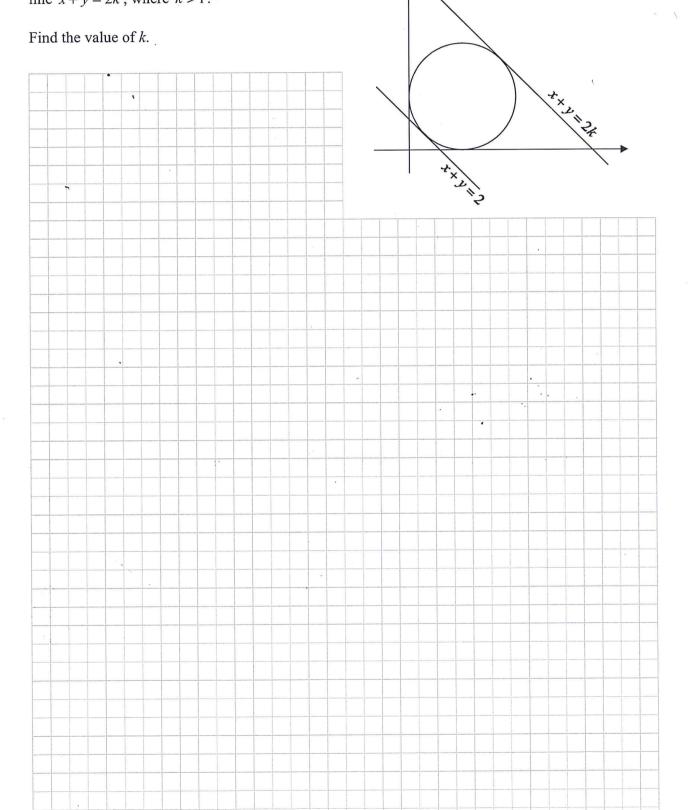
(LCH 2012 Paper 2, Q3)

(25 marks)

The circle shown in the diagram has, as tangents, the *x*-axis, the *y*-axis, the line x + y = 2 and the line x + y = 2k, where k > 1.

Question 3



LCH 2012 Sample Raper

(25 marks)

(a)	Write	down t	he equa	tion of	the	ciı	cle wi	th c	en	tre ([-3,	2) ar	id r	ad	ius	4.	
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(b) A circle has equation $x^2 + y^2 - 2x + 4y - 15 = 0$. Find the values of m for which the line mx + 2y - 7 = 0 is a tangent to this circle

Find the values of m for which the line $mx + 2y - 7 = 0$ is a tangent to this circle.									
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The line AB intersects the y-axis at D. Find the coordinates of D. 1 1 Find the perpendicular distance from C to AB. (c) Hence, find the area of the triangle ADC.

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Leaving Certificate 2012 - Sample Paper

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Project Maths, Phase 1 Paper 2 – Higher Level