

**Higher Maths**  
**SQA 2016 Paper 2**  
**Question 4**



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Circles  $C_1$  and  $C_2$  have equations  $(x+5)^2 + (y-6)^2 = 9$   
and  $x^2 + y^2 - 6x - 16 = 0$  respectively.

- (a) Write down the centres and radii of  $C_1$  and  $C_2$ . 4
- (b) Show that  $C_1$  and  $C_2$  do not intersect. 3
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Answers:

- (a) Radius of  $C_1 = 3$   
Radius of  $C_2 = 5$
- (b) Proof. Show that the sum of the radii is less than the distance between the centres.