

MEI Pure Mathematics Core 1

Co-ordinate geometry

Q 2E

⑩ $A(6,3)$ $B(10,1)$

i) Mid pt AB = $(8,2)$

ii) \perp^r bisector of chord passes thro' the centre

$$\begin{aligned}\therefore \text{Dist of centre from chord} &= \sqrt{(11-8)^2 + (8-2)^2} \\ &= \underline{\underline{\sqrt{45}}}\end{aligned}$$

iii) Radius of circle is distance from A (or B) to the centre.

$$\begin{aligned}\therefore r &= \sqrt{(6-11)^2 + (3-8)^2} \\ &= \underline{\underline{\sqrt{50}}}\end{aligned}$$