

7 The point A has coordinates $(-1, 6)$ and the point B has coordinates $(7, 2)$.

(i) Find the equation of the perpendicular bisector of AB , giving your answer in the form $y = mx + c$.
[4]

(ii) A point C on the perpendicular bisector has coordinates (p, q) . The distance OC is 2 units, where O is the origin. Write down two equations involving p and q and hence find the coordinates of the possible positions of C .
[5]