

- 9** The coordinates of A are $(-3, 2)$ and the coordinates of C are $(5, 6)$. The mid-point of AC is M and the perpendicular bisector of AC cuts the x -axis at B .
- (i) Find the equation of MB and the coordinates of B . [5]
- (ii) Show that AB is perpendicular to BC . [2]
- (iii) Given that $ABCD$ is a square, find the coordinates of D and the length of AD . [2]