

- 4**  $C$  is the mid-point of the line joining  $A(14, -7)$  to  $B(-6, 3)$ . The line through  $C$  perpendicular to  $AB$  crosses the  $y$ -axis at  $D$ .
- (i) Find the equation of the line  $CD$ , giving your answer in the form  $y = mx + c$ . [4]
- (ii) Find the distance  $AD$ . [2]