

- 7 The line  $L_1$  passes through the points  $A(2, 5)$  and  $B(10, 9)$ . The line  $L_2$  is parallel to  $L_1$  and passes through the origin. The point  $C$  lies on  $L_2$  such that  $AC$  is perpendicular to  $L_2$ . Find
- (i) the coordinates of  $C$ , [5]
  - (ii) the distance  $AC$ . [2]