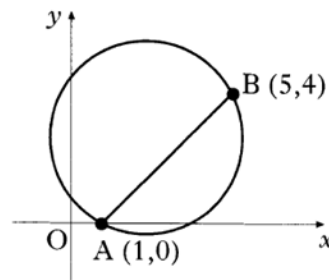


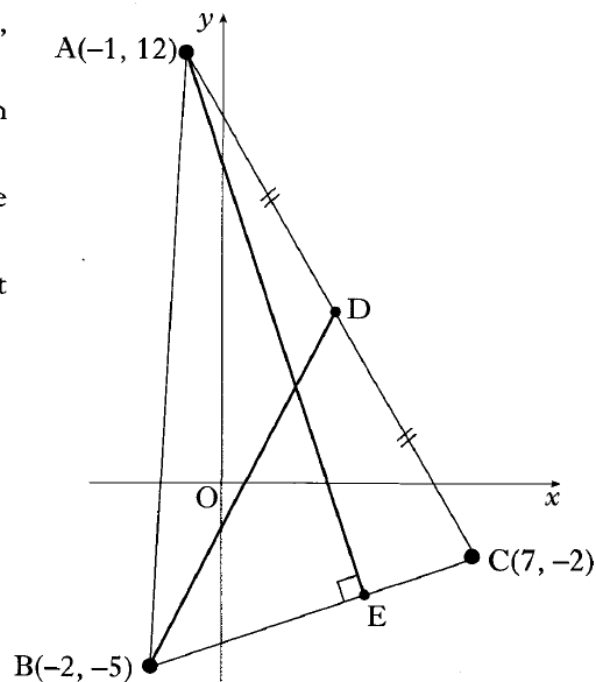
- 1 Find the equation of the line which passes through the point $(-1, 3)$ and is perpendicular to the line with equation $4x + y - 1 = 0$. 3

- 2 The point A has coordinates $(7, 4)$. The straight lines with equations $x + 3y + 1 = 0$ and $2x + 5y = 0$ intersect at B.
 (a) Find the gradient of AB. 3
 (b) Hence show that AB is perpendicular to only one of these two lines. 5

- 3 A chord joins the points $A(1,0)$ and $B(5,4)$ on the circle as shown in the diagram. Show that the equation of the perpendicular bisector of chord AB is $x + y = 5$.



- 4 Triangle ABC has vertices $A(-1, 12)$, $B(-2, -5)$ and $C(7, -2)$.
 (a) Find the equation of the median BD. 3
 (b) Find the equation of the altitude AE. 3
 (c) Find the coordinates of the point of intersection of BD and AE. 3



24 Marks
