

**6** The line  $L$  has equation

$$5y + 12x = 298$$

A circle,  $C$ , has centre  $(7, 9)$

$L$  is a tangent to  $C$ .

**6 (a)** Find the coordinates of the point of intersection of  $L$  and  $C$ .

Fully justify your answer.

**[5 marks]**

**6 (b)** Find the equation of  $C$ .

**[3 marks]**