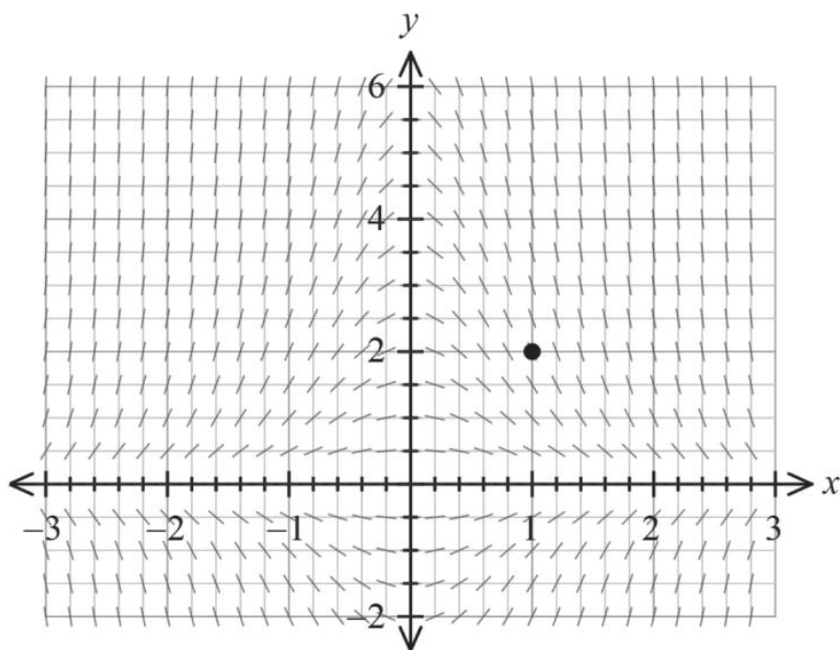


**Question 11****(5 marks)**

A slope field is given by the equation  $\frac{dy}{dx} = k(xy)$  where  $k$  is a constant.



- (a) The value of the slope field at the point  $(1, 2)$  is equal to  $-4$ . Determine the value of the constant  $k$ . (2 marks)
- (b) Determine the equation for the solution curve that contains the point  $(1, 2)$  and draw this curve on the diagram above. (3 marks)