Question 2 (6 marks)

The point and part of the slope field given by is shown below.

<EFOFEX>
id:fxd{fadd5fef-7c2b-4eb5-9143-77e03aec827c}

FXData:

</EFOFEX>

(a) Determine the equation of the solution curve through in the form . (4 marks)

(b) Draw the solution curve through on the slope field above. (2 marks)

Question 2 (6 marks)

The point and part of the slope field given by is shown below.

<EFOFEX>
id:fxd{18b0a78b-fc3d-4907-a02a-97f8ee148289}

FXData:

</EFOFEX>

(a) Determine the equation of the solution curve through in the form . (4 marks)

|  |
| --- |
| Solution |
|  |
| Specific behaviours |
| ✓ separates variables as an integration statement  ü correctly uses trig identity on RHS  ü correctly obtains antiderivative, with constant  ü evaluates constant and writes in required form |

(b) Draw the solution curve through on the slope field above. (2 marks)

|  |
| --- |
| Solution |
| See slope field |
| Specific behaviours |
| ✓ curve to left of -axis has two inflection points and follows slope field  ü curve to right of -axis has two inflection points and follows slope field |