9 A curve has equation $y = \mathrm{f}(x)$ where

$$\mathrm{f}(x) = x\,(6 - x)$$

9 (a) Find $\mathrm{f}'(x)$

[2 marks]

9 (b) The diagram below shows the graph of $y = \mathrm{f}(x)$

On the same diagram sketch the gradient function for this curve, stating the coordinates of any points where the gradient function cuts the axes.

[3 marks]