

Higher Maths
SQA 2017 Paper 2
Question 4



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- (a) Express $3x^2 + 24x + 50$ in the form $a(x+b)^2 + c$. 3
- (b) Given that $f(x) = x^3 + 12x^2 + 50x - 11$, find $f'(x)$. 2
- (c) Hence, or otherwise, explain why the curve with equation $y = f(x)$ is strictly increasing for all values of x . 2
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Answers:

- (a) $3(x+4)^2 + 2$
- (b) $3x^2 + 24x + 50$
- (c) $3(x+4)^2 + 2 > 0$