

Higher Maths  
SQA 2019 Paper 2  
Question 10



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- (a) Show that  $(x + 3)$  is a factor of  $3x^4 + 10x^3 + x^2 - 8x - 6$ . 2
- (b) Hence, or otherwise, factorise  $3x^4 + 10x^3 + x^2 - 8x - 6$  fully. 5
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Answers:

- (a) Use  $-3$  in synthetic division, algebraic division or evaluation, to show that the remainder upon division by  $(x + 3)$  equals 0.
- (b)  $(x + 3)(x - 1)(3x^2 + 4x + 2)$