

Advanced Higher Maths
SQA 2016 Paper
Question 6



Find Maclaurin expansions for $\sin 3x$ and e^{4x} up to and including the term in x^3 .

Hence obtain an expansion for $e^{4x} \sin 3x$ up to and including the term in x^3 .

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Answers:

$$3x - \frac{9}{2}x^3$$

$$1 + 4x + 8x^2 + \frac{32}{3}x^3$$

$$3x + 12x^2 + \frac{39}{2}x^3 \dots$$