Advanced Higher Maths
SQA 2024 Paper 2
Question 7

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(a) Find and simplify the Maclaurin expansion, up to and including the term in x^3, for:

(i) e^{2x} **2**

(ii) $\sin 3x$. **2**

(b) Hence find the Maclaurin expansion for $e^{2\sin 3x}$ up to and including the term in x^3. **2**

Answers:

(a) (i) $1+2x+2x^2+\frac{4}{3}x^3$

(ii) $3x-\frac{9}{2}x^3$

(b) $1+6x+18x^2+27x^3$