

- 5 (a) Find the first three terms, in ascending powers of x , in the binomial expansion of $(1 + 6x)^{\frac{1}{3}}$
- [2 marks]
- 5 (b) Use the result from part (a) to obtain an approximation to $\sqrt[3]{1.18}$ giving your answer to 4 decimal places.
- [2 marks]
- 5 (c) Explain why substituting $x = \frac{1}{2}$ into your answer to part (a) does not lead to a valid approximation for $\sqrt[3]{4}$.
- [1 mark]