6 **(a)** **(i)** Use the binomial theorem to expand $(1+3x)^7$ in ascending powers of x, as far as the term in x^3. Simplify each term. [2]

(ii) Show that your expansion from **part (i)** gives the value of 1.03^7 as 1.23 to 2 decimal places. [2]

(b) Find the term independent of x in the expansion of $\left(\frac{x^4}{2}+\frac{2}{x}\right)^{15}$. [2]

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