1. Expand $(3x-2y)^7$ in descending powers of x.

2. In the expansion of $(x^2-\frac{2}{x})^{12}$ find
   (a) the constant term, and
   (b) the coefficient of x^9.

3. Expand $(1+3x)^3(1-x)^5$ in ascending powers of x as far as the term in x^3.

4. (a) Expand $(1+kx-x^2)^6$ in ascending powers of x as far as the term in x^2.
   (b) Hence find the values of k , if the coefficient of x^2 is 123.

5. (a) Expand $(2+x)^5$ and $(2-x)^5$ in ascending powers of x.
   (b) Express $(2+x)^5-(2-x)^5$ in ascending powers of x.
   (c) By using the result in (b), evaluate $(2.1)^5-(1.9)^5$, answer correct to 5 decimal places.