**Binomial expansion**

**Core 4**

**Review Sheet H**

1. (a) Write down the first four terms of the expansion of 

(b) By substituting x = 0.01, find √1.01, correct to 6 places of decimals.

2. (a) Expand  in ascending powers of *x*, as far as the term in *x3*.

(b) State the range of values of x for which the expansion is valid.

(c) Use part (a) to estimate correct to 4 decimal places.

3. (a) Expand in ascending powers of *x*, as far as the term in *x3*.

(b) State the range of values of x for which the expansion is valid.

(c) Estimate to 4 decimal places.

4. Expand in ascending powers of *x*, as far as the term in *x3*.

State the range of values of *x* for which the expansion is valid.

a)  b)

5. (a) Given that  express f(x) in partial fractions.

(b) Show that 

(c) Will the expansion be valid for x=2.5? Explain your answer.

6. By using **partial fractions** find the first three terms in the expansion of:

State the range of values of x for which your expansion is valid.