Dealing with

Remember

Examples

1. Find first four terms in the binomial expansion of . State the values of for which the expansion is valid.

Quickfire First Step

What would be the first step in finding the Binomial expansion of each of these?

|  |  |  |
| --- | --- | --- |
|  | First Step… | Valid when? |
| 1.  |  |  |
| 2.  |  |  |
| 3.  |  |  |
| 4.  |  |  |
| 5.  |  |  |

Test Your Understanding



**Extension**

[AEA 2006 Q1]

1. For , write down the binomial series expansion of in ascending powers of up to and including the term in .
2. Hence, or otherwise, show that
can be written in the form . Write down the values of the integers and .
3. Find the set of values of for which the series in part (b) is convergent.

Exercise 4B Page 99