Dealing with

Remember

Examples

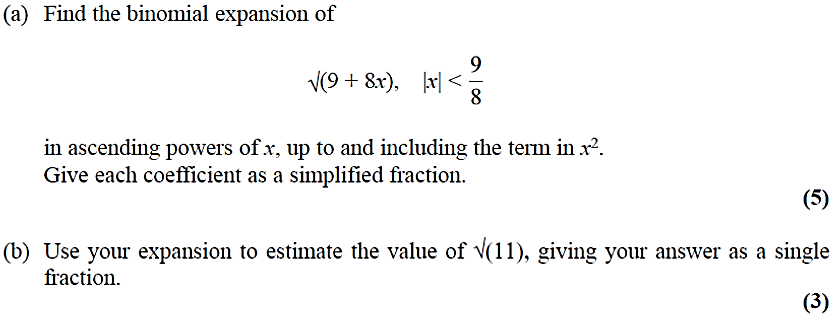
1. Find first four terms in the binomial expansion of . State the values of for which the expansion is valid.

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.

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