

## Practice for Applications of Algebra and Calculus Assessment

### Applications of Algebra and Calculus Assessment Standard 1.2

1. For the arithmetic sequence 7, 13, 19, ... find:
  - a) the 18<sup>th</sup> term (2)
  - b) the sum of the first 18 terms. (2)
  
2. The first term of an arithmetic sequence is 4 and the third term is 14, find:
  - a) the 10<sup>th</sup> term (3)
  - b) the sum to 10 terms. (2)
  
3. For the geometric sequence 64, 16, 4, ... find:
  - a) the 9<sup>th</sup> term (2)
  - b) an expression for the sum of n terms. (2)
  
4. Find the first three terms of the Maclaurin series for  $f(x) = e^{3x}$ . (4)
  
5. Find the first three non-zero terms of the Maclaurin series for  $f(x) = \sin 2x$ . (4)