Quiz - Sequences & Series

Part I – Questions 1-3: GDC allowed

1. The second term of an arithmetic sequence is 11. The sum of the first four terms is 58. Find the first term $a_1$, and the common difference $d$, of the arithmetic sequence. [6 marks]

2. Find the sum of all positive integers between 100 and 400 that are multiples of 3. [6 marks]

3. Evaluate: $\sum_{r=1}^{23} (11 - 4r)$ [5 marks]
Part II – Questions 4 & 5: No GDC

4. The sum of the first two terms of a geometric series is 9 and the sum to infinity of the geometric series is 25. Find all possible values for the first term of the geometric series. [7 marks]

5. The second, fourth and ninth terms of an arithmetic sequence are also consecutive terms of a geometric sequence. Find the common ratio, $r$, of the geometric sequence. [6 marks]