5. Find the sum of the positive terms of the arithmetic sequence 85, 78, 71, ... *[6 marks]*

6. The second term of an arithmetic sequence is 6. The sum of the first four terms of the arithmetic sequence is 8. Find the first term, a, and the common difference, d, of the sequence. *[6 marks]*

7. Consider the arithmetic series $-6 + 1 + 8 + 15 + ...$

Find the least number of terms so that the sum of the series is greater than 10 000. *[6 marks]*

8. The sum of the first n terms of an arithmetic sequence is $S_n = 3n^2 - 2n$. Find the nth term u_n. *[6 marks]*

9. A circular disc is cut into twelve sectors whose angles are in an arithmetic sequence.

The angle of the largest sector is twice the angle of the smallest sector. Find the size of the angle of the smallest sector. *[6 marks]*

10. The ratio of the fifth term to the twelfth term of a sequence in an arithmetic progression is $\frac{6}{13}$.

If each term of this sequence is positive, and the product of the first term and the third term is 32, find the sum of the first 100 terms of this sequence. *[7 marks]*

11. What is the sum of all three-digit numbers which are multiples of 14 but not 21? *[8 marks]*

5. 559

6. $a = 14,\ d = -8$

7. 55

8. $u_n = 6n - 5$

9. $\theta = 20°$

10. 10 300

11. 23 926