Exercise 2

Paper 1 style · No calculator

2 4 marks SL 1.2 ●●○ Typical

Consider the series $\sum_{k=1}^{30}(2k+5)$.

(a) Write down the first term and the common difference. **[2]**

(b) Find the sum of the series. **[2]**

The markscheme is on the next page: try the question first. Written and verified by a practising IB mathematics teacher, produced with AI assistance; solved twice and recomputed by software. Not affiliated with or endorsed by the International Baccalaureate Organization.
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MARKSCHEME (a)

$u_1 = 7$ **A1**

$d = 2$ **A1**

Total 2 marks

MARKSCHEME (b)

$\frac{30}{2}(2\times 7 + 29\times 2)$ or $\frac{30}{2}(7+65)$ **(M1)**

$= 1080$ **A1**

Total 2 marks