

Advanced Higher Maths
SQA 2023 Paper 1
Question 7

(a) Find an expression for $\sum_{r=1}^n (r^2 + 3r)$ in terms of n .

Express your answer in the form $\frac{1}{3}n(n+a)(n+b)$.

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(b) Hence, or otherwise, find $\sum_{r=11}^{20} (r^2 + 3r)$.

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Answers:

(a) $\frac{1}{3}n(n+1)(n+5)$

(b) 2950