

Advanced Higher Maths  
SQA 2024 Paper 2  
Question 5



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- (a) State and simplify the general term in the binomial expansion of  $\left(2x^2 - \frac{1}{x^3}\right)^{16}$ . 3
- (b) Hence, or otherwise, find the coefficient of  $\frac{1}{x^{18}}$  in the expansion of  $\left(2x^2 - \frac{1}{x^3}\right)^{16}$ . 2
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Answers:

(a)  $\binom{16}{r} (-1)^r 2^{16-r} x^{32-5r}$

(b) 512512