

Advanced Higher Maths
SQA 2019 Paper
Question 9



(a) Write down and simplify the general term in the binomial expansion of

$$\left(2x^2 - \frac{d}{x^3}\right)^7, \text{ where } d \text{ is a constant.}$$

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(b) Given that the coefficient of $\frac{1}{x}$ is $-70\,000$, find the value of d .

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Answers:

(a) $\binom{7}{r} 2^{7-r} (-d)^r x^{14-5r}$

(b) $d = 5$