

Higher Maths
SQA 2016 Paper 1
Question 11



(a) A and C are the points $(1, 3, -2)$ and $(4, -3, 4)$ respectively.

Point B divides AC in the ratio 1 : 2.

Find the coordinates of B.

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(b) $k\vec{AC}$ is a vector of magnitude 1, where $k > 0$.

Determine the value of k .

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Answers:

(a) $(2, 1, 0)$

(b) $k = \frac{1}{9}$