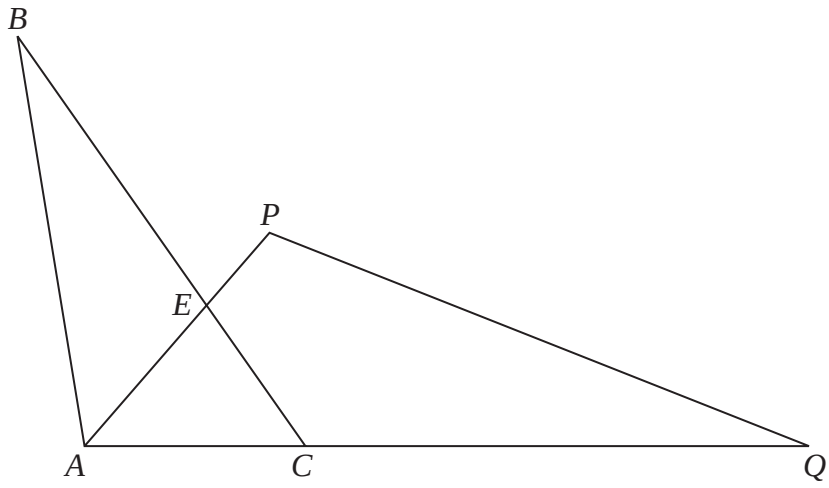
19



The diagram shows triangle ABC and triangle APQ
$AQ = 3AC$

The point E lies on the line CB such that $CE : EB = 2 : 3$

$\overrightarrow{AE} = \mathbf{a}$ $\overrightarrow{AC} = \mathbf{b}$

Express $\overrightarrow{QB}$ in terms of **a** and **b**.
Give your answer in its simplest form.

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(Total for Question 19 is 4 marks)