4. $f(z) = 2z^4 - 19z^3 + Az^2 + Bz - 156$

where A and B are constants.

The complex number $5 - i$ is a root of the equation $f(z) = 0$

(a) Write down another complex root of this equation.

(1)

(b) Solve the equation $f(z) = 0$ completely.

(5)

(c) Determine the value of A and the value of B.

(2)

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Question 4 continued

(Total for Question 4 is 8 marks)

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