PMT

4 $f(x) = 2x^3 + ax^2 + bx + 18$ where a and b are constants

When $f'(x)$ is divided by $(x - 2)$ the remainder is 5

Given that $(x - 2)$ is a factor of $f(x)$

(a) find the value of a and the value of b.

(6)

(b) Express $f(x)$ as a product of linear factors.

(3)

(c) Hence use algebra to solve the equation $f(x) = 0$

(2)

P 6 0 4 7 5 A 0 8 3 6

Question 4 continued

(Total for Question 4 is 11 marks)