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21 $(x + 2)$ is a factor of $6x^3 + 31x^2 + kx + 30$

(a) Use the factor theorem to show that $k = 53$

(2)

(b) Factorise fully $6x^3 + 31x^2 + 53x + 30$

(3)

(Total for Question 21 is 5 marks)

