(ii) the value of $\alpha^4 + \beta^4$

10	The roots of the equation $x^2 + 6x + 2 = 0$ are α and β , where $\alpha > \beta$. Without solving the equation
	(a) find
	(i) the value of $\alpha^2 + \beta^2$

(5)

(b) Show that $\alpha - \beta = 2\sqrt{7}$ (3)

(c) Factorise completely $\alpha^4 - \beta^4$ (2)

(d) Hence find the exact value of $\alpha^4 - \beta^4$ (2)

Given that $\beta^4 = A + B\sqrt{7}$ where A and B are positive constants (e) find the value of A and the value of B.

Question 10 continued					



Question 10 continued				



Question 10 continued				
	(Total for Question 10 is 14 mayles)			
	(Total for Question 10 is 14 marks)			

