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10 Solve the equation	
$\log_4 x^3 + 8\log_x 64 = 22$	( <del>-</del> )
	(7)

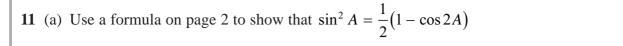
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Question 10 continued
(Total for Question 10 is 7 marks)





(3)

(b) Show that 
$$\sin^4 x + \cos^4 x = \frac{3 + \cos 4x}{4}$$

(5)

(c) Hence solve, in degrees to one decimal place, the equation

$$8\sin^4\left(\frac{\theta}{2}\right) + 8\cos^4\left(\frac{\theta}{2}\right) = 5\sin(2\theta) + 6 \quad \text{for } 0^\circ \leqslant \theta < 180^\circ$$
(4)




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Question 11 continued



estion 11 continued	
	(Total for Question 11 is 12 marks)
TOTAL FOR PAPER IS 100 M	