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8	(a)	Show that one solution of the equation $x^3 - 4x - 2 = 0$ lies between 2 and 3.

		[1]
	(b)	Use trial and improvement to find this solution correct to one decimal place. You must show all your trials and their outcomes.

(b)			
	4		

(a) Expand and simplify.

$$(x-4)(x-3)$$

(a)[2]

(b) Factorise completely.

$$4a^2b - 6ab$$



- 10 OCR electronics are having a sale.
 - (a) The price of a washing machine is reduced from £450 to £393-75.

Calculate the percentage reduction.

(a)% [3]

(b) The price of a television is reduced by 7.5%.

The price in the sale is £999.

Calculate the price of the television before the sale.

b) £[3]

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ROC CRO CRO ROC B 3280m L Not to scale

The diagram shows the position of a lighthouse, L, and three ships A, B and C.

A is 2750 m North of L. B is 3280 m West of L. Angle BLC = 38-5°.

(a) Calculate the bearing of B from A.

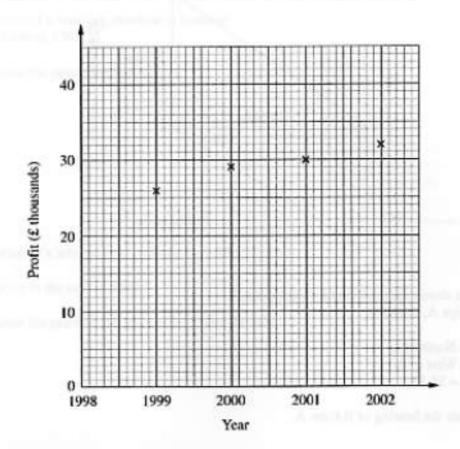
(a) ° [4]

(b) Calculate the distance CL. Give your answer to a sensible degree of accuracy.

(b)m [4]



12 This graph shows the three-year moving average of the profits made by a shop.



This table shows the profit made by the shop for five years.

Year	1998	1999	2000	2001	2002
Profit (£ thousands)	20	30	28	29	33

Use the table and the moving averages to show that the profit in 2003 was £34000.

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