National 5 Final Exam Practice		
Statistical Skills	Working with Linear Models	
Average Allocation	4 Marks	

1. The graph below shows the relationship between the amount of sugar in grams, S, contained in fizzy drinks and the number of calories, C, they contain. Point A represents (6, 50) and point B represents (15, 95)



Sugar (grams)

- a) Find the equation of the line of best fit in terms of S and C.
- b) Use your equation to estimate the number of calories in a drink with 28 grams of sugar.
- 2. Repeat Question 1a if A represents (8, 42) and B represents (20, 96)
 - b) Use your equation to estimate the number of calories in a drink with 32 grams of sugar.
- The graph below shows the relationship between the number of minutes, *M*, spent reading a book, and the number of chapters, *C*, completed. Point P represents (6, 2) and point Q represents (27, 5).



- a) Find the equation of the line of best fit in terms of M and C.
- b) Use your equation to estimate the number of chapters which can be read in 2 hours.
- 4. Repeat question 3a if P represents (32, 4) and Q represents (50, 10).
 - b) Use your equation to estimate how many chapters could be read in 3 hours.