

Paper Reference 9ST0/03
Pearson Edexcel
Level 3 GCE

Statistics
Advanced
PAPER 3: Statistics in Practice

Wednesday 19 June 2024 – Morning

Data Booklet

THIS DATA BOOKLET **MUST** BE RETURNED WITH THE
ANSWER BOOKLET AT THE END OF THE EXAMINATION.

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

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Question 1

KEY

4 | 5 represents 45

4	5						
5	1	8	8				
6	1	3	7				
7	1	1	3	5	5	9	
8	3						
9	1						

Question 2

Cats that have diabetes are treated with insulin.
It is believed that insulin might cause a growth disease in cats.

Cats, that are being treated with insulin, routinely have their level of IGF–I, a growth hormone, measured to see if the insulin is causing any side effects.

A random sample of 23 cats with diabetes was obtained and these cats were put into three categories

- short–term, those who have received insulin for 31 days or less
- medium–term, those who have received insulin for 32 days to 14 months
- long–term, those who have received insulin for more than 14 months

Routine measurements of the levels of IGF–I (nanomoles per litre) in these cats are given in the table below.

IGF–I measurements		
Short–term	Medium–term	Long–term
51	74	189
49	52	163
30	49	158
28	48	144
26	45	142
25	40	109
24	38	88
23		88

(continued on the next page)

Turn over

Question 2 continued.

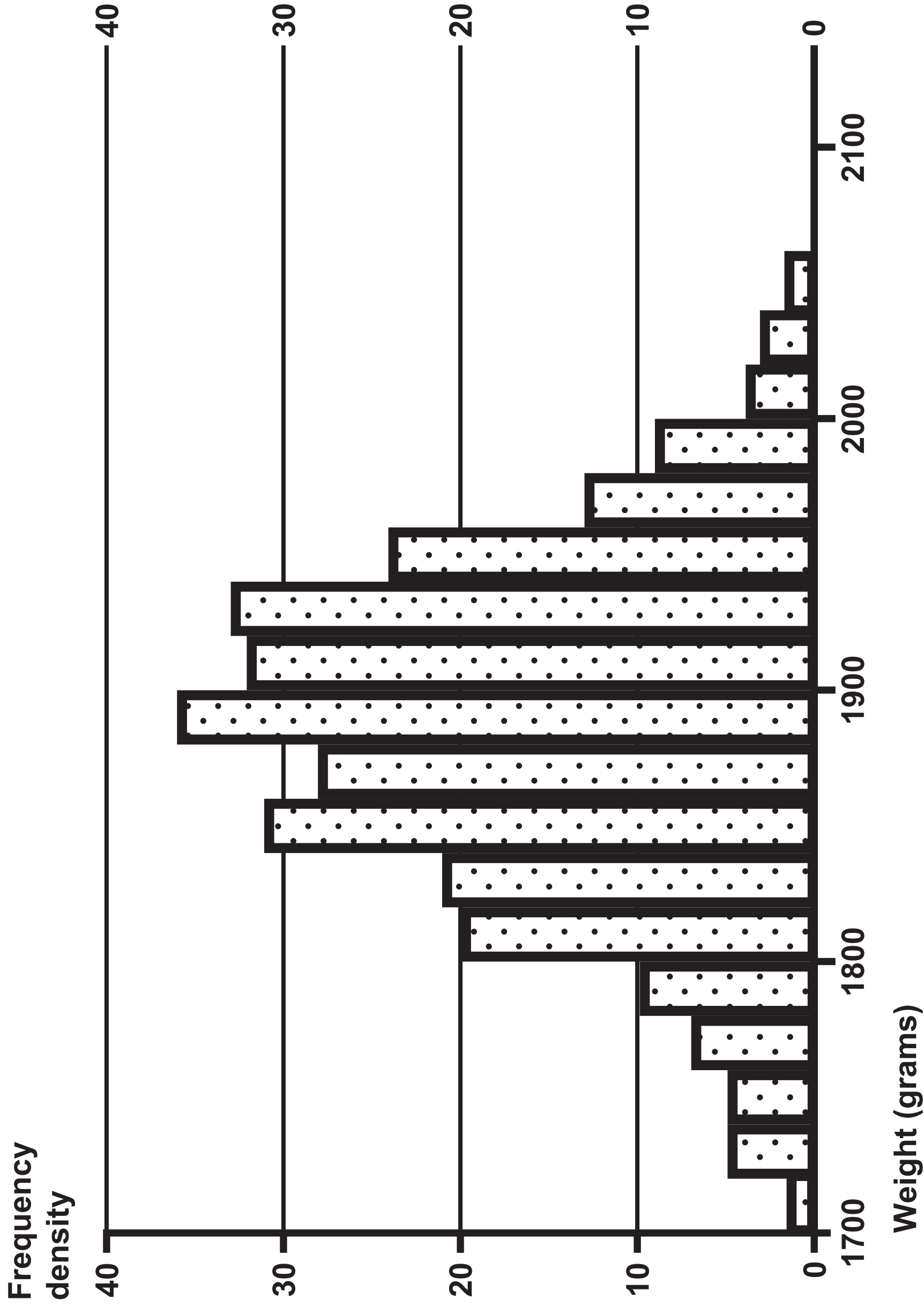
The data produced the following summary statistic

$$\sum x_i^2 = 182\,569$$

Viraj decides to carry out one-factor ANOVA to investigate whether there is any difference between the mean IGF-I measurement for the different lengths of time the cats received insulin.

Question 3

Number of ticks in 1 m ²	
Timber acquisition	Growing of forest
15	16
11	12
8	7
3	5
	4
	1



Sources

Question 2

[Source: <https://journals.sagepub.com/doi/pdf/10.1016/j.jfms.2004.01.002>]