

Paper Reference 9ST0/02
Pearson Edexcel
Level 3 GCE

Statistics
Advanced
PAPER 2: Statistical Inference

Data Booklet

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

Surname					
Other names					
Centre Number					
Candidate Number					

INSTRUCTIONS

There may be spare copies of some data sheets in case you need them.

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

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Question 1

Computer model	Mathematical model
$-7 \cdot 5$	$4 \cdot 4$
$-3 \cdot 2$	$8 \cdot 3$
$-3 \cdot 3$	$8 \cdot 2$
-5	$6 \cdot 9$
$-1 \cdot 5$	$10 \cdot 1$
$-0 \cdot 6$	$10 \cdot 9$
$0 \cdot 7$	$12 \cdot 2$
$4 \cdot 8$	$15 \cdot 9$
$5 \cdot 2$	$15 \cdot 9$

Question 2

A large-scale study of the sleeping habits of students in India was carried out.

Students in the study were required to fill out questionnaires about their sleeping habits, which were then used to give a score on a standard Pittsburgh Sleep Quality Index (PSQI).

A student with a PSQI score more than a given value was classified as a ‘poor sleeper’.

Amongst the study’s reported findings were

- the PSQI scores for students had mean 6.45 and standard deviation 2.85**
- 20% of students slept for less than 5 hours a night,**
- 62.6% of students were classified as ‘poor sleepers’.**

Question 3 – Table 1

Category	p-value
People active	$p < 0.0001$
People posing	$p < 0.01$
Birds	$p < 0.01$
Arthropods (insects, spiders, etc.)	$p < 0.01$
Reptiles	$p < 0.01$

Question 3 – Table 2

Category	Cohen's d
People active	0·82
People posing	1·49
Birds	−1·00
Arthropods (insects, spiders, etc.)	−1·50
Reptiles	−0·44

Question 4

	Plot fertiliser concentration			
Oat seed variety	10%	20%	30%	Total
Aspen	5·5	5·8	5·7	17
Canyon	5·6	5·6	5·5	16·7
Delfin	5·5	5·8	5·6	16·9
Merlin	5·8	6·1	6·3	18·2
Total	22·4	23·3	23·1	68·8

Question 5

		No laughter	Fake laughter	Real laughter
Joke	1	2·3	1·9	1·0
	2	3·2	2·9	4·2
	3	2·1	4·2	3·8
	4	3·4	1·9	3·8
	5	2·5	3·5	3·8
	6	2·2	3·0	3·7
	7	1·3	1·9	2·5
	8	1·3	2·4	2·9
	9	1·4	3·5	4·3
	10	2·5	4·0	5·0

Question 6

		First experience		
		Yes	No	Total
Likelihood of using company again	Definitely yes	9	12	21
	Probably yes	18	2	20
	No	17	4	21
Total		44	18	62

Sources

Question 1

[Data source: <https://doi.org/10.1590/1679-78254177>]

Question 2

[Source: ncbi.nlm.nih.gov/pmc/articles/PMC4659578]

Question 3

[Data source: <https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12343>]