

Task 3 : What is the range for the following data sets?

- a) 5, 4, 1, 2, 1, 2, 3, 4, 5, 6, 8, 7, 2. Range _____
- b) 9, 11, 16, 4, 6, 17, 22, 35, 2, 12, 13. Range _____
- c) 3, 4, 5, 8, 11, 14, 12, 16, 1, 9, 15, 17. Range _____

If the standard deviation is low, this tells us that the mean is _____

If the standard deviation is high, it this tells us that the mean is _____

Task 4 : *Read the research scenarios below and then answer the questions for each one:*

- Ps were tested on their ability to avoid obstacles in a computer driving simulation. The simulator recorded how many times the Ps hit an obstacle during the simulation (max. 30). Half of the Ps were engaged in conversation during the simulation by the experimenter, so they had to respond verbally to a series of questions. The other half completed the same task but in silence.

Directional Hypothesis: *Participants will be more likely to hit obstacles when they are engaged in conversation than when they are not*

	Conversation condition	Silence condition
Mean	7.3	5.4
Standard Deviation	4.7	1.2

- (i) What do the means in each condition suggest about the effect of the distraction task on their performance?

- (ii) Comment on what the standard deviations in each condition tell us about the data:

Researchers asked A Level student PPs, to complete a questionnaire about how long they spent studying each week. They were divided into two groups: those who spent more than ten hours a week studying and those who spent ten hours or less. After the exams, the researchers compared the exam marks (max. 100) of the two groups.

Directional Hypothesis: *Students who study for more than ten hours per week will achieve higher exam scores than those who study for less than ten hours per week.*

	Less than 10 hrs	10 hrs or more
Mean	65.9	68.3
Standard Deviation	15.4	8.9

- (iii) What do the means in each condition suggest about the effect studying on their performance?

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- (iv) Comment on what the standard deviations in each condition tell us about the data:

- 3 Some psychology students read about an experiment which suggested that organisation is a useful strategy for improving memory. The students carried out an experiment to investigate the effects of organisation on word recall. They made up a list of 50 items that could be bought in a supermarket. The participants were teachers at their school. One group of participants saw the words organised into categories such as fruit, vegetables, dairy products and cleaning materials. The other group saw the same words presented randomly.

The results are given in **Table 1** below.

Table 1 The number of words correctly recalled by participants who saw the organised list and participants who saw the random list

	Organised List	Random List
	20	15
	15	13
	18	19
	45	14
	24	20
	23	10
	28	21
	21	6
	25	22
	30	25
Measure of central tendency		
Measure of dispersion		

- 3 (a) Identify a suitable measure of central tendency that could be used with these data. Justify your answer.

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(2 marks)

The Display of Quantitative Data

Task 1: read about this in the information pack.

- What types of data are represented in the following charts or graphs?

Tables

Bar Charts

Histogram

Scattergram

Task 2: Watch the videos and note take on bar charts and a histogram

<https://www.youtube.com/watch?v=JsEwJD1mYpU>

<https://www.youtube.com/watch?v=iYluqvuvGvAw>

Bar Charts

Histogram

Draw a graph for the following sets of data

Data set 1

Number of hours day care a week	Mean number of aggressive acts per week
0-5	1
6-10	3
11-15	2
16-20	4
21-25	2
26-30	3
31-35	9

Data Set

Participant	Self - rating of enjoyment of psychology	Score on a question test (n 20)
1	10	18
2	10	20
3	8	19
4	8	15
5	8	16
6	7	13
7	5	10
8	5	12
9	4	2
10	1	0