

5.

Doodling

Doodling can be described as 'drawing whilst our attention is otherwise occupied', such as when trying to listen to what someone is saying, or whilst trying to read something etc. Although it seems that this may make it less likely that we are able to focus on other things happening at the same time, some research suggests that it may actually improve our ability to concentrate. A psychologist wants to study this further by using the experimental method to investigate if people are able to concentrate better when doodling compared to when not doodling.



Outline one strength of having nominal data in this study.

[3]

6.

Phombies (talk, don't walk!)

People seem to use their mobile phones more and more these days and it seems we prefer to text than actually talk to other people at times. When out and about some people even use their phone whilst still walking, looking like some kind of phone zombie (phombie), often so fixated on their display screen that they are completely oblivious of other people and their surroundings.

One psychologist conducted an observation study in a busy town centre to investigate this further and see if there was a difference in males' and females' use of the phone whilst walking. The data is presented below.



Number of males and females walking or not walking whilst using their mobile phone in a town centre		
	Walking whilst using phone	Not walking whilst using phone
Males	84	32
Females	58	26

What level of data has been collected in this study? Give reasons for your answer.

[2]

7.

Phombies (talk, don't walk!)

People seem to use their mobile phones more and more these days and it seems we prefer to text than actually talk to other people at times. When out and about some people even use their phone whilst still walking, looking like some kind of phone zombie (phombie), often so fixated on their display screen that they are completely oblivious of other people and their surroundings.

One psychologist conducted an observation study in a busy town centre to investigate this further and see if there was a difference in males' and females' use of the phone whilst walking. The data is presented below.



Number of males and females walking or not walking whilst using their mobile phone in a town centre		
	Walking whilst using phone	Not walking whilst using phone
Males	84	32
Females	58	26

Draw a fully labelled pie chart displaying the data from this study.

[4]

8.

Phombies (talk, don't walk!)

People seem to use their mobile phones more and more these days and it seems we prefer to text than actually talk to other people at times. When out and about some people even use their phone whilst still walking, looking like some kind of phone zombie (phombie), often so fixated on their display screen that they are completely oblivious of other people and their surroundings.

One psychologist conducted an observation study in a busy town centre to investigate this further and see if there was a difference in males' and females' use of the phone whilst walking. The data is presented below.



Number of males and females walking or not walking whilst using their mobile phone in a town centre		
	Walking whilst using phone	Not walking whilst using phone
Males	84	32
Females	58	26

Calculate the overall percentage of people using their phones whilst walking. Show your workings.

[3]

9(a).

Phombies (talk, don't walk!)

People seem to use their mobile phones more and more these days and it seems we prefer to text than actually talk to other people at times. When out and about some people even use their phone whilst still walking, looking like some kind of phone zombie (phombie), often so fixated on their display screen that they are completely oblivious of other people and their surroundings.

One psychologist conducted an observation study in a busy town centre to investigate this further and see if there was a difference in males' and females' use of the phone whilst walking. The data is presented below.



Number of males and females walking or not walking whilst using their mobile phone in a town centre		
	Walking whilst using phone	Not walking whilst using phone
Males	84	32
Females	58	26

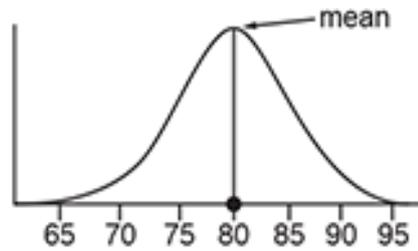
10. Which of these indicates the research is significant at the 2% level of probability?

- A $p < 2.0$
- B $p < 0.2$
- C $p < 0.02$
- D $p > 0.002$

Your answer

[1]

11. What is the mode in the data displayed in this normal distribution curve where the mean is 80?



- A 75
- B 80
- C 85
- D 95

Your answer

[1]

12. In a study of stress, which of the following would produce interval level data?

- A asking participants to keep a diary of how they feel
- B classifying people as 'calm' or 'anxious'
- C ratings on a zero to ten scale (0 = 'relaxed', 10 = 'nervous')
- D temperature readings in degrees celsius

Your answer

[1]

13. In the study by Freud, what kind of data was the information received about Little Hans in letters from his father?

- A interval
- B ordinal
- C primary
- D secondary

Your answer

[1]

14. In the study of hemispheric deconnection by Sperry, what is the decimal for the duration in seconds that images were presented to the visual fields?

- A** 0.001
- B** 0.01
- C** 0.1
- D** 1.0

Your answer

[1]

15. Which of these is an ethical consideration under the British Psychological Society (BPS) guidelines?

- A** rejection
- B** respect
- C** respiration
- D** respite

Your answer

[1]

16. Which of these is the name given to the type of validity that refers to when research at least appears to be measuring what it claims to?

- A** face
- B** internal
- C** population
- D** test-retest

Your answer

[1]

17. What is the median for this set of scores? 12, 8, 18, 16, 5, 9, 11, 18

- A** 11
- B** 11.5
- C** 12
- D** 18

Your answer

[1]

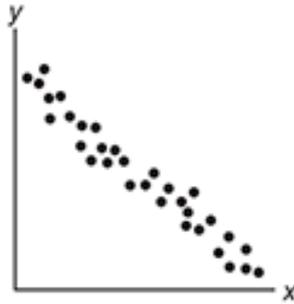
18. What is the range for this set of scores? 32, 28, 15, 24, 9

- A 9
- B 19
- C 23
- D 32

Your answer

[1]

19. Which correlation coefficient best relates to the data displayed in this scatter diagram?



- A -0.7
- B -0.07
- C +0.7
- D +0.07

Your answer

[1]

20(a).

Weigh more outgoing?

Some research suggests that personality is linked to a person's body type (their structure and weight), with larger people having a more extrovert (lively and outgoing) personality than those who are smaller. To investigate this further, a psychologist wants to use the correlation technique to examine the relationship between weight and extroversion.

Outline how you could obtain secondary data to use as the measurement of the variable 'weight'.

[3]

(b). Outline **one** strength of having some qualitative data in this study.

[3]

23.

Weigh more outgoing?

Some research suggests that personality is linked to a person's body type (their structure and weight), with larger people having a more extrovert (lively and outgoing) personality than those who are smaller. To investigate this further, a psychologist wants to use the correlation technique to examine the relationship between weight and extroversion.

Explain **one** way that the design of this study could increase the generalisability of the findings from this study.

[3]

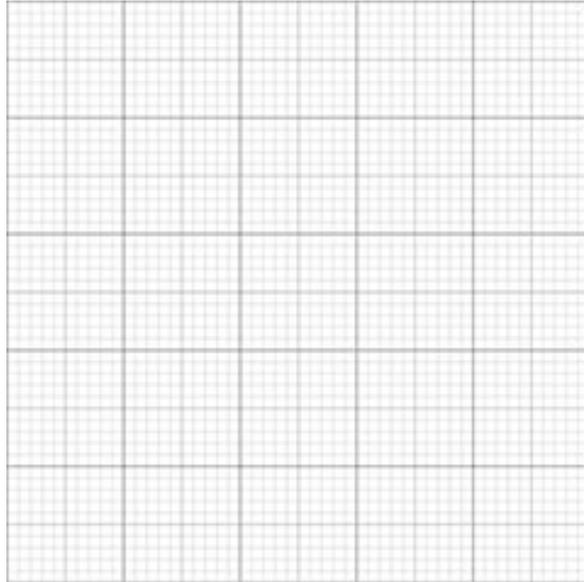
24.

Steps to increase bin use

Research suggests that, when trying to encourage people to change their behaviour in some way, 'telling people what to do' is not always effective and a more subtle approach may be better ('nudge theory'). To investigate this, a psychologist conducted an observation study monitoring people's use of two different types of litter bin situated close to each other in the pedestrian area of one large town centre – one that had steps printed on the pavement leading up to it and another without the steps. Recordings were made each time any item was deposited in the bin throughout a continuous period from 10am to 2pm. The data on how many people used the bins is presented in the table below.

Table showing the number of times each bin was used by males and females		
	Males	Females
Bin with steps	9	14
Bin without steps	5	12

Draw a fully labelled bar chart showing the overall use of the two different types of bin.



[4]

25.

Steps to increase bin use

Research suggests that, when trying to encourage people to change their behaviour in some way, 'telling people what to do' is not always effective and a more subtle approach may be better ('nudge theory'). To investigate this, a psychologist conducted an observation study monitoring people's use of two different types of litter bin situated close to each other in the pedestrian area of one large town centre – one that had steps printed on the pavement leading up to it and another without the steps. Recordings were made each time any item was deposited in the bin throughout a continuous period from 10am to 2pm. The data on how many people used the bins is presented in the table below.

Table showing the number of times each bin was used by males and females		
	Males	Females
Bin with steps	9	14
Bin without steps	5	12

Calculate the percentage of people who used the bin with steps leading up to it. Show your workings and present your finding to **two** significant figures.

[3]

27(a).

Steps to increase bin use

Research suggests that, when trying to encourage people to change their behaviour in some way, 'telling people what to do' is not always effective and a more subtle approach may be better ('nudge theory'). To investigate this, a psychologist conducted an observation study monitoring people's use of two different types of litter bin situated close to each other in the pedestrian area of one large town centre – one that had steps printed on the pavement leading up to it and another without the steps. Recordings were made each time any item was deposited in the bin throughout a continuous period from 10am to 2pm. The data on how many people used the bins is presented in the table below.

Table showing the number of times each bin was used by males and females		
	Males	Females
Bin with steps	9	14
Bin without steps	5	12

The psychologist used the Chi-square test to analyse the data from this study. Give **one** reason why this would be the appropriate non-parametric inferential test to use.

[2]

(b). Calculate the degrees of freedom for use with the Chi-square test in this study. Show your workings.

[2]

(c). Using the extract from the table of critical values presented below, what is the critical value for use with the Chi-square test in this study at the 5% level of probability?

df	Probability level					
	0.5	0.10	0.05	0.02	0.01	0.001
1	0.455	2.706	3.841	5.412	6.635	10.827
2	1.386	4.605	5.991	7.824	9.210	13.815
3	2.366	6.251	7.815	9.837	11.345	16.268
4	3.357	7.779	9.488	11.668	13.277	18.465
5	4.351	9.236	11.070	13.388	15.086	20.517

[1]

(d). The psychologist obtained a calculated value of 0.4058 after analysing the data with the Chi-square test. Write a significance statement presenting this finding showing if the results are significant at the 5% level of probability or not.

[3]

(e). What does the analysis from the Chi-square test inform us regarding the use of the two different types of bin from this study?

[3]

28(a).

Steps to increase bin use

Research suggests that, when trying to encourage people to change their behaviour in some way, 'telling people what to do' is not always effective and a more subtle approach may be better ('nudge theory'). To investigate this, a psychologist conducted an observation study monitoring people's use of two different types of litter bin situated close to each other in the pedestrian area of one large town centre – one that had steps printed on the pavement leading up to it and another without the steps. Recordings were made each time any item was deposited in the bin throughout a continuous period from 10am to 2pm. The data on how many people used the bins is presented in the table below.

Table showing the number of times each bin was used by males and females		
	Males	Females
Bin with steps	9	14
Bin without steps	5	12

Outline **one** strength of the use of the nominal data collected in this study.

[3]

(b). Outline **one** weakness of the use of the nominal data collected in this study.

[3]

29.

Steps to increase bin use

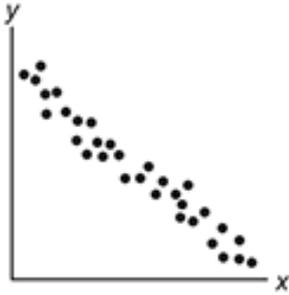
Research suggests that, when trying to encourage people to change their behaviour in some way, 'telling people what to do' is not always effective and a more subtle approach may be better ('nudge theory'). To investigate this, a psychologist conducted an observation study monitoring people's use of two different types of litter bin situated close to each other in the pedestrian area of one large town centre – one that had steps printed on the pavement leading up to it and another without the steps. Recordings were made each time any item was deposited in the bin throughout a continuous period from 10am to 2pm. The data on how many people used the bins is presented in the table below.

Table showing the number of times each bin was used by males and females		
	Males	Females
Bin with steps	9	14
Bin without steps	5	12

Explain what it would mean if there was a 'Type 1 error' in this study.

[2]

30. Which of the calculated values from a Spearman's Rho test best reflect the correlation displayed in the scatter diagram below?



- A $r_s = +0.2$
- B $r_s = +0.8$
- C $r_s = -0.2$
- D $r_s = -0.8$

Your answer

[1]

31. What name is given to the type of data collected directly by the researchers?

- A preliminary
- B precursor
- C principal
- D primary

Your answer

[1]

32. What type of data is displayed in a histogram?

- A anomalous
- B continuous
- C nominal
- D ranked

Your answer

[1]

33. What does the term 'representativeness' refer to?

- A the extent to which the findings can be applied to everyday life
- B the extent to which the findings can be applied to other related research
- C the extent to which the findings can be applied to the population
- D the extent to which the findings can be applied to the sample

Your answer

[1]

34. What type of distribution refers to a situation in which the majority of participants score highly on the measure on which they are assessed?

- A** bimodal
- B** negatively skewed
- C** normal
- D** positively skewed

Your answer

[1]

35. Which of these best describes what a 'Type 2' error refers to?

- A** incorrectly accepting the null hypothesis
- B** incorrectly rejecting the null hypothesis
- C** use of the incorrect inferential statistical test
- D** use of the incorrect tables of critical values

Your answer

[1]

36. When would it be best to use the median rather than the mean?

- A** when there are a few scores much lower than the rest
- B** when there are a few scores very similar to each other
- C** when there is a large number of scores overall
- D** when there is a small number of scores overall

Your answer

[1]

37. Which of these inferential statistical tests is the only one that does not involve ranking of the data at some stage?

- A** Chi-square
- B** Mann Whitney U test
- C** Spearman's Rho
- D** Wilcoxon Signed Ranks test

Your answer

[1]

38. A study investigating the difference in aggression between boys and girls recorded the number of times a child shouted at someone during playtime. Which of the following would be the appropriate inferential test to use to analyse the data from this study?

- A** Binomial sign test
- B** Chi-square
- C** Mann Whitney U test
- D** Wilcoxon Signed Ranks test

Your answer

[1]

39. Which symbol in statistics means 'approximately'?

- A α
- B $<$
- C \sim
- D Σ

Your answer

[1]

40. What type of validity refers to the extent to which the scores on one measure are able to predict the outcome on another related measure?

- A criterion
- B ecological
- C face
- D population

Your answer

[1]

41. For which of the following would it be appropriate to use a line graph to display the data?

- A differences in the ability of males and females to identify six emotions displayed on the face
- B number of acts of aggression displayed by boys and girls
- C preference for four different learning styles displayed as percentages
- D self-ratings of aggression (1 to 10) at different times of day (10am to 10pm)

Your answer

[1]

42. What fraction is represented by the decimal 0.05?

- A $\frac{1}{2}$
- B $\frac{1}{5}$
- C $\frac{1}{20}$
- D $\frac{1}{50}$

Your answer

[1]

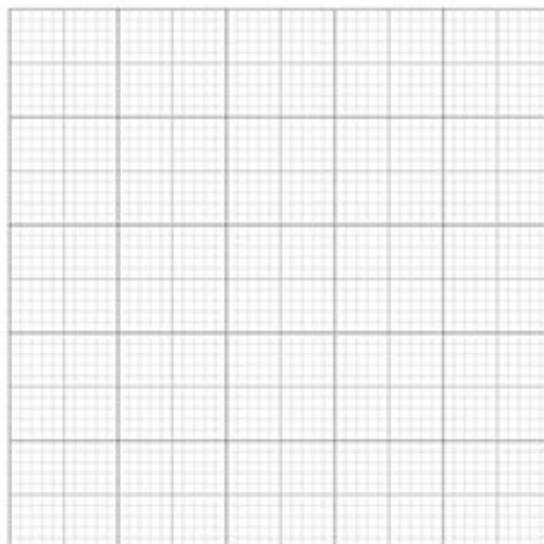
46.

Exercise your stress

Stress affects many people, probably everyone at some stage of their life, and can be damaging to our health if it reaches a high level over a continuous period. Psychologists interested in finding ways to control and manage stress have investigated the correlation between exercise and stress by getting a group of ten volunteers to record the average amount of exercise taken each month and comparing this to the amount of stress experienced during the same period. The data obtained is presented in the table below.

Participant	Average number of hours exercise taken each month	Stress rating (0 = 'none' to 100 'high')
a	55	10
b	25	50
c	30	25
d	0	90
e	40	30
f	50	30
g	20	80
h	45	20
i	15	60
j	60	100

Draw a fully labelled scatter diagram displaying the data from this study

**[4]**

48.

Exercise your stress

Stress affects many people, probably everyone at some stage of their life, and can be damaging to our health if it reaches a high level over a continuous period. Psychologists interested in finding ways to control and manage stress have investigated the correlation between exercise and stress by getting a group of ten volunteers to record the average amount of exercise taken each month and comparing this to the amount of stress experienced during the same period. The data obtained is presented in the table below.

Participant	Average number of hours exercise taken each month	Stress rating (0 = 'none' to 100 'high')
a	55	10
b	25	50
c	30	25
d	0	90
e	40	30
f	50	30
g	20	80
h	45	20
i	15	60
j	60	100

Explain why the Spearman's Rho would be the appropriate non-parametric inferential statistical test to use to analyse the data from this study.

49.

Exercise your stress

Stress affects many people, probably everyone at some stage of their life, and can be damaging to our health if it reaches a high level over a continuous period. Psychologists interested in finding ways to control and manage stress have investigated the correlation between exercise and stress by getting a group of ten volunteers to record the average amount of exercise taken each month and comparing this to the amount of stress experienced during the same period. The data obtained is presented in the table below.

Participant	Average number of hours exercise taken each month	Stress rating (0 = 'none' to 100 'high')
a	55	10
b	25	50
c	30	25
d	0	90
e	40	30
f	50	30
g	20	80
h	45	20
i	15	60
j	60	100

After carrying out a Spearman's Rho inferential statistical test the calculated value obtained was $r_s = -0.37$. Explain what this means.

[3]

50(a).**Exercise your stress**

Stress affects many people, probably everyone at some stage of their life, and can be damaging to our health if it reaches a high level over a continuous period. Psychologists interested in finding ways to control and manage stress have investigated the correlation between exercise and stress by getting a group of ten volunteers to record the average amount of exercise taken each month and comparing this to the amount of stress experienced during the same period. The data obtained is presented in the table below.

Participant	Average number of hours exercise taken each month	Stress rating (0 = 'none' to 100 'high')
a	55	10
b	25	50
c	30	25
d	0	90
e	40	30
f	50	30
g	20	80
h	45	20
i	15	60
j	60	100

The standard deviation was calculated for the average number of hours exercised each month and found to be 18.275666882497

What is this written to two significant figures?

[1]

(b). Explain what this informs us about the average number of hours exercised each month by participants in this study.

[2]

51. Put the letter of the correct answer in the box provided.

Which of these indicates the research is significant at the 1% level of probability?

- A $p < 1.0$
- B $p < 0.1$
- C $p < 0.01$
- D $p > 0.01$

Your answer

[1]

52. Put the letter of the correct answer in the box provided.

What type of data is obtained from other (often already existing) sources, rather than directly by the researchers?

- A nominal
- B primary
- C secondary
- D qualitative

Your answer

[1]

53. Put the letter of the correct answer in the box provided.

In which type of distribution is the mean, median and mode all the same score?

- A a negatively skewed distribution
- B a normal distribution
- C a positively skewed distribution
- D an asymmetrical distribution

Your answer

[1]

54. Put the letter of the correct answer in the box provided.

What is N_a in the formula for the Mann Whitney U test below?

$$U_a = N_a N_b + \left[\frac{N_a(N_a + 1)}{2} \right] - R_a \quad U_b = (N_a N_b) - U_a$$

- A mean of condition a
- B number of participants in condition a
- C the number of participants in condition a multiplied by the number of participants in condition b
- D total of the ranks for condition a

Your answer

[1]

55. Put the letter of the correct answer in the box provided.

What is the median for this set of scores? 21, 14, 20, 21, 12, 17

- A 17
- B 17.5
- C 18.5
- D 20.5

Your answer

[1]

56(a).

Stand to attention. An educational psychologist conducted a study to investigate if getting pupils to stand up when completing some of their work in class increased their performance by making them concentrate more. An independent measures design experiment was used testing a small group of 12 pupils. Half of the class stood up at their desks whilst completing a maths test whilst the others remained seated. The data obtained from the study is presented in the table below.

Score on maths test (max 20) when stood up or sat down when taking the test			
Stood up		Sat down	
participant	score	participant	score
1	18	1	14
2	20	2	8
3	17	3	20
4	15	4	4
5	18	5	15
6	19	6	12

Calculate the mean for the 'stood up' condition and present your findings to 2 decimal places. Show your workings.

[2]

(b). Calculate the mean for the 'sat down' condition and present your findings to 2 significant figures. Show your workings.

[2]

(c). Calculate the mean percentage score in each condition. Show your workings.

[2]

57(a).

Stand to attention. An educational psychologist conducted a study to investigate if getting pupils to stand up when completing some of their work in class increased their performance by making them concentrate more. An independent measures design experiment was used testing a small group of 12 pupils. Half of the class stood up at their desks whilst completing a maths test whilst the others remained seated. The data obtained from the study is presented in the table below.

Score on maths test (max 20) when stood up or sat down when taking the test			
Stood up		Sat down	
participant	score	participant	score
1	18	1	14
2	20	2	8
3	17	3	20
4	15	4	4
5	18	5	15
6	19	6	12

Explain how you would calculate the standard deviation for each condition of this study.

58(a).

Stand to attention. An educational psychologist conducted a study to investigate if getting pupils to stand up when completing some of their work in class increased their performance by making them concentrate more. An independent measures design experiment was used testing a small group of 12 pupils. Half of the class stood up at their desks whilst completing a maths test whilst the others remained seated. The data obtained from the study is presented in the table below.

Score on maths test (max 20) when stood up or sat down when taking the test			
Stood up		Sat down	
participant	score	participant	score
1	18	1	14
2	20	2	8
3	17	3	20
4	15	4	4
5	18	5	15
6	19	6	12

What would be the appropriate non-parametric inferential statistical test to use to analyse the data from this study? Give reasons for your answer.

[2]

(b). Outline how the data in this study would be ranked before using the inferential statistical test.

[2]

60(a). A psychologist conducted a survey assessing beliefs in the paranormal with a sample of 144 people.

25% of people said they believe in ghosts. How many people is this?

- A** 25
- B** 36
- C** 40
- D** 72

Your answer

[1]

(b). 24 people said they believe aliens exist. What fraction of the sample is this?

- A** $\frac{1}{3}$
- B** $\frac{1}{4}$
- C** $\frac{1}{6}$
- D** $\frac{2}{3}$

Your answer

[1]

(c). What is the ratio of people who believe in ghosts to aliens?

- A** 1:4
- B** 2:3
- C** 3:2
- D** 4:1

Your answer

[1]

61(a).

Love is in the (question) air. We can fall 'into it' and 'out of it', it can make us feel both happy and sad or even angry and mad, but what is love? Psychologists decided to investigate this further by using the self-report method in which they posted out a questionnaire to members of the public to complete. Some of the data from the first twenty males and first twenty females to respond are presented in the tables below.

Table 1: Ratings of the importance of physical appearance for being in love given by male and female participants (1= 'not very important' to 10 = 'extremely important')

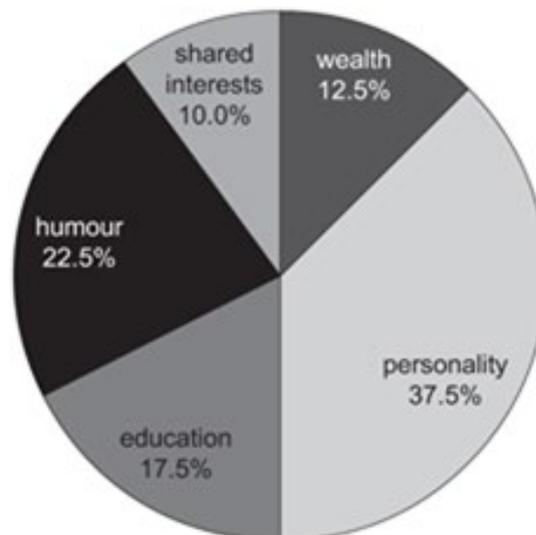
males	females
7	3
5	7
9	1
10	6
8	4
7	9
7	6
9	3
8	5
10	3
9	5
10	3
9	5
9	5
7	3
6	7
5	5
6	1
7	3
9	2

Table 2: Responses to the question ...
'do you believe in love at first sight?'

	yes	no
males	5	15
females	12	8

Figure 1

Pie chart showing the percentage of people who thought which attributes were the most important for being in love with someone



A partly completed table of measures of central tendency for the data collected in Table 1 is presented below.

Measures of central tendency for the ratings of the importance of physical appearance for being in love given by male and female participants		
	males	females
mean		4.3
median	8.0	
mode	9.0	

Answer the following questions so that the rest of the table can be completed. Show all your workings.

Calculate the mean rating of the importance of physical appearance for being in love given by males. Write your answer to two significant figures.

..... [3]

(b). Calculate the median rating of the importance of physical appearance for being in love given by females.

..... [2]

(c). What is the mode for the importance of physical appearance for being in love given by females?

..... [1]

62(a).

Love is in the (question) air. We can fall 'into it' and 'out of it', it can make us feel both happy and sad or even angry and mad, but what is love? Psychologists decided to investigate this further by using the self-report method in which they posted out a questionnaire to members of the public to complete. Some of the data from the first twenty males and first twenty females to respond are presented in the tables below.

Table 1: Ratings of the importance of physical appearance for being in love given by male and female participants (1= 'not very important' to 10 = 'extremely important')

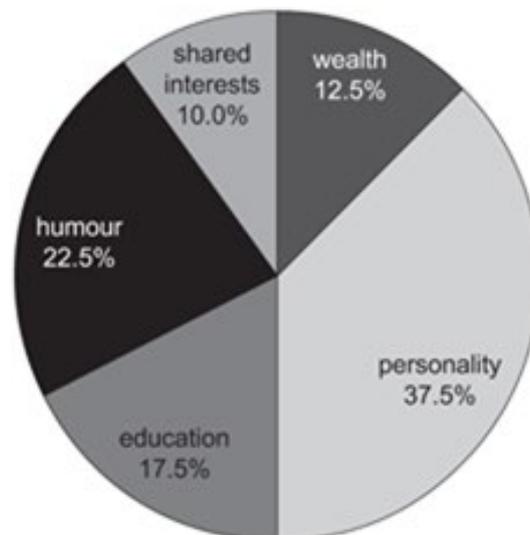
males	females
7	3
5	7
9	1
10	6
8	4
7	9
7	6
9	3
8	5
10	3
9	5
10	3
9	5
9	5
7	3
6	7
5	5
6	1
7	3
9	2

Table 2: Responses to the question ... 'do you believe in love at first sight?'

	yes	no
males	5	15
females	12	8

Figure 1

Pie chart showing the percentage of people who thought which attributes were the most important for being in love with someone



What is the range for the rating of the importance of physical appearance for being in love given by males **and** females? Show your workings.

[4]

(b). Outline **one** conclusion from the calculation of the range for the rating of the importance of physical appearance for being in love given by males and females.

[3]

63(a).

Love is in the (question) air. We can fall 'in to it' and 'out of it', it can make us feel both happy and sad or even angry and mad, but what is love? Psychologists decided to investigate this further by using the self-report method in which they posted out a questionnaire to members of the public to complete. Some of the data from the first twenty males and first twenty females to respond are presented in the tables below.

Table 1: Ratings of the importance of physical appearance for being in love given by male and female participants (1= 'not very important' to 10 = 'extremely important')

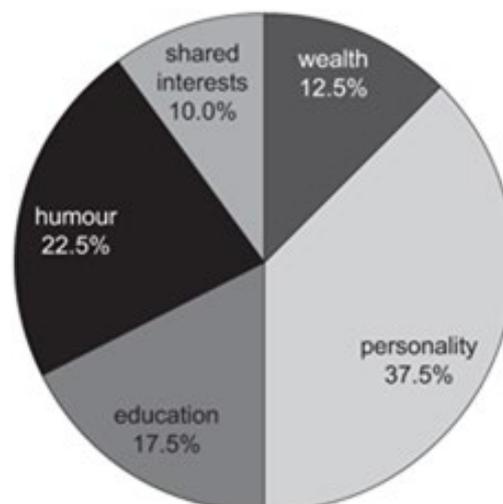
males	females
7	3
5	7
9	1
10	6
8	4
7	9
7	6
9	3
8	5
10	3
9	5
10	3
9	5
9	5
7	3
6	7
5	5
6	1

Table 2: Responses to the question ... 'do you believe in love at first sight?'

	yes	no
males	5	15
females	12	8

Figure 1

Pie chart showing the percentage of people who thought which attributes were the most important for being in love with someone



(c). Write the significance statement for the analysis performed on this data using the Chi-square test.

----- [2]

64(a).

A psychologist was interested in the relationship between individuals' language ability and their physical co-ordination. She used a correlational analysis to investigate this in a self-selected sample of 34 adult participants.

Each participant completed a language ability test. This test involved both having to spell a list of 20 words and answering 20 closed questions on the meaning of words. The participants' physical co-ordination was then calculated by rating them on six different tasks including balancing on a beam, catching a ball and copying a dance routine.

Outline how each of the following ethical considerations could have been dealt with in this study.

Confidentiality

----- [2]

(b). Informed consent

----- [2]

(c). Protection of participant

----- [2]

65. What is 7.864 written to two significant figures?

- A 7.8
- B 7.86
- C 7.9
- D 8.0

Your answer

[1]

66. What is the median for this set of data 10, 12, 6, 5, 14, 3?

- A 6.5
- B 7.5
- C 8.0
- D 16.0

Your answer

[1]

67. What is the collective term for the mean, median and mode?

- A measures of central dispersion
- B measures of central range
- C measures of central significance
- D measures of central tendency

Your answer

[1]

68. Which of these is a non-parametric inferential statistical test?

- A Mann Whitney U
- B Mean
- C Range
- D standard deviation

Your answer

[1]

69. A newspaper includes 12 pages of sport and eight pages of TV. What is the ratio of sport to TV? Give your answer in its simplest form.

- A 2:3
- B 3:2
- C 8:12
- D 12:8

Your answer

[1]

70. What is 2,830 written in standard form?

- A 2.83×10^2
- B 2.83×10^3
- C 2.83×10^4
- D 2.83×10^5

Your answer

[1]

71. Which of these is nominal data?

- A classifying participants as 'good', 'average' or 'poor'
- B ratings by an independent observer on a scale of 1 (very good) to 10 (very poor)
- C self-ratings by participants on a scale of 1 (very good) to 10 (very poor)
- D use of a stopwatch to record reaction time

Your answer

[1]

72. Which of these best describes the type of data collected in Loftus and Palmer's study investigating the effects of language on memory?

- A both quantitative and qualitative
- B neither qualitative or quantitative
- C qualitative
- D quantitative

Your answer

[1]

73.

An educational psychologist conducted research investigating if there was any correlation between performance in two different but related subjects studied by GCSE students. If a student is good at one, are they also good at the other, and if they perform poorly in one does that mean that they will also struggle to do well in the other one? Data from a small sample is presented in the table below.

Table showing test results from two different subjects studied by a group of participants		
Participant	Maths test score	Physics test score
a	20	23
b	15	17
c	6	24
d	28	30
e	8	12
f	11	14
g	22	24
h	4	7

Identify **two** findings from the data presented in this table.

[4]

74.

An educational psychologist conducted research investigating if there was any correlation between performance in two different, but related subjects studied by GCSE students. If a student is good at one, are they also good at the other, and if they perform poorly in one does that mean that they will also struggle to do well in the other one? Data from a small sample is presented in the table below.

Table showing test results from two different subjects studied by a group of participants

Participant	Maths test score	Physics test score
a	20	23
b	15	17
c	6	24
d	28	30
e	8	12
f	11	14
g	22	24
h	4	7

Draw a scatter diagram displaying the results of this study.



[4]

(c). Suggest **one** advantage of using standard deviation instead of the range to analyse the data from each test.

----- [3]

76(a).

An educational psychologist conducted research investigating if there was any correlation between performance in two different, but related subjects studied by GCSE students. If a student is good at one, are they also good at the other, and if they perform poorly in one does that mean that they will also struggle to do well in the other one? Data from a small sample is presented in the table below.

Table showing test results from two different subjects studied by a group of participants		
Participant	Maths test score	Physics test score
a	20	23
b	15	17
c	6	24
d	28	30
e	8	12
f	11	14
g	22	24
h	4	7

The psychologist used the Spearman's ranked correlation coefficient test to analyse the data from this study. Explain why this was an appropriate test to use.

----- [2]

(b). Explain how the data would be ranked for use in this test.

----- [2]

(c). The inferential test result produced a calculated value of +0.7083. Explain what this means.

[3]

77(a).

An educational psychologist conducted research investigating if there was any correlation between performance in two different, but related subjects studied by GCSE students. If a student is good at one, are they also good at the other, and if they perform poorly in one does that mean that they will also struggle to do well in the other one? Data from a small sample is presented in the table below.

Table showing test results from two different subjects studied by a group of participants		
Participant	Maths test score	Physics test score
a	20	23
b	15	17
c	6	24
d	28	30
e	8	12
f	11	14
g	22	24
h	4	7

What does the term 'critical value' refer to?

[1]

(b). How would the critical value be obtained in this study?

[2]

78. Which of these refers to making a Type 1 error?

- A abandoning the null hypothesis
- B ignoring the null hypothesis
- C incorrectly accepting the null hypothesis
- D incorrectly rejecting the null hypothesis

Your answer

[1]

79. Which of these best describes what the variance is?

- A measure of central tendency
- B measure of dispersion around the mean
- C measure of proportionality
- D measure of quantifiable data

Your answer

[1]

80. Which of these indicates the research is significant at the 5% level of probability?

- A $p < 0.005$
- B $p < 0.05$
- C $p > 0.005$
- D $p > 0.05$

Your answer

[1]

81.

Love is in the (question) air. We can fall 'in to it' and 'out of it', it can make us feel both happy and sad or even angry and mad, but what is love? Psychologists decided to investigate this further by using the self-report method in which they posted out a questionnaire to members of the public to complete. Some of the data from the first twenty males and first twenty females to respond are presented in the tables below.

Table 1: Ratings of the importance of physical appearance for being in love given by male and female participants (1= 'not very important' to 10 = 'extremely important')

males	females
7	3
5	7
9	1
10	6
8	4
7	9
7	6
9	3
8	5
10	3
9	5
10	3
9	5

Table 2: Responses to the question ...
'do you believe in love at first sight?'

	yes	no
males	5	15
females	12	8

Figure 1

Pie chart showing the percentage of people who thought which attributes were the most important for being in love with someone

83. Which of these is an advantage of secondary data?

- A already exists
- B easy to analyse
- C easy to interpret
- D ecologically valid

Your answer

[1]

84. What is meant by the term 'significant result'?

- A it is a figure that you compare the answer from an inferential statistical test with
- B it is an answer that exceeds a certain probability level
- C it is an answer that tells us something important
- D it is an approximate answer

Your answer

[1]

85. In research terms, what is meant by 'social desirability'?

- A responding in a way that is approved of by society
- B responding in a way to be perceived as more friendly
- C responding in a way to please the researcher
- D responding in a way to provide the researcher with what is expected

Your answer

[1]

86. Which of these different types of data would not include any information in the form of words?

- A interval
- B nominal
- C qualitative
- D secondary

Your answer

[1]

87. Which of these could not be the answer from a Spearman's Rho inferential statistical test?

- A -0.728
- B 0.3
- C 0.892
- D 1.52

Your answer

[1]

88. What is the mode in this set of data?

17, 19, 12, 23, 17, 25, 19, 17

- A 17
- B 17.5
- C 18
- D 19

Your answer

[1]

89. The variance of a set of scores is 14.44. What is the standard deviation?

- A 1.4
- B 3.8
- C 14.0
- D 208.51

Your answer

[1]

90. What type of data was collected in the Piliavin et al. study for the dependent variable of length of time that it took for help to be offered?

- A interval
- B non-parametric
- C qualitative
- D secondary

Your answer

[1]

93.

Love is in the (question) air. We can fall 'into it' and 'out of it', it can make us feel both happy and sad or even angry and mad, but what is love? Psychologists decided to investigate this further by using the self-report method in which they posted out a questionnaire to members of the public to complete. Some of the data from the first twenty males and first twenty females to respond are presented in the tables below.

Table 1: Ratings of the importance of physical appearance for being in love given by male and female participants (1= 'not very important' to 10 = 'extremely important')

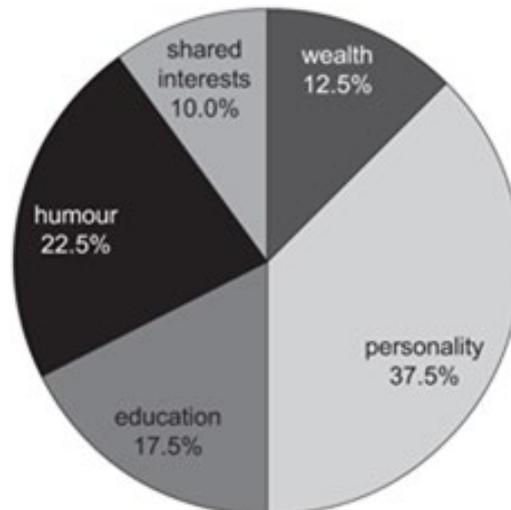
males	females
7	3
5	7
9	1
10	6
8	4
7	9
7	6
9	3
8	5
10	3
9	5
10	3
9	5
9	5
7	3
6	7
5	5
6	1
7	3
9	2

Table 2: Responses to the question ... 'do you believe in love at first sight?'

	yes	no
males	5	15
females	12	8

Figure 1

Pie chart showing the percentage of people who thought which attributes were the most important for being in love with someone



Using the data presented in the pie chart in Figure 1, calculate the ratio of how many people said that personality was the most important thing for love compared to those that said wealth was. Show your workings.

[4]

94. What is the name given to data before any analysis is performed?

- A interval
- B ordinal
- C quantitative
- D raw

Your answer

[1]

95. What is the name for the type of reliability that involves dividing a test into two parts and comparing scores on both parts of the test?

- A semi-structured
- B split-half
- C test-retest
- D two-tailed

Your answer

[1]

96.

Curious findings. Curiosity can be regarded as simply 'a desire to know things' – having an inquisitive mind. However, some people may be more curious than others. To investigate this a psychologist secretly observed students who were left alone in a room waiting to be interviewed about their experiences at university shortly before they graduated. In the room was a box with a sign in front of it that clearly said, 'do not open the box'.

Type of student	DID open the box	Did NOT open the box
Science	39	21
Arts	15	45
Humanities	8	22

98. The following scores were obtained in a memory test from one group of participants:
10, 18, 24, 9, 11, 14, 23, 8, 19, 17, 14, 20

Using the formula below, what would the value of 'n' be when calculating the standard deviation for this set of scores?

$$SD = \sqrt{\frac{\sum(x - \bar{x})^2}{n}}$$

- A** 10
- B** 11
- C** 12
- D** 13

Your answer

[1]

99. When would it be best to use the median rather than the mean?

- A** when there are a few scores much higher than the rest
- B** when there are few scores similar to the rest
- C** when there are lots of high scores
- D** when there are lots of low scores

Your answer

[1]

100. Two different versions of a personality test are given to participants and then the results compared. What type of validity is being checked here?

- A** concurrent
- B** criterion
- C** ecological
- D** face

Your answer

[1]

101. Which best describes what a 'type 1 error' refers to?

- A** null hypothesis incorrectly accepted
- B** null hypothesis incorrectly rejected
- C** use of the wrong inferential statistical test
- D** use of wrong table of critical values

Your answer

[1]

102. Which of these is not a measure of dispersion?

- A mean
- B range
- C standard deviation
- D variance

Your answer

[1]

103. What is the median of this set of scores?

15, 14, 8, 9, 12, 6, 10, 3, 2, 9

- A 9
- B 9.5
- C 10.5
- D 18

Your answer

[1]

104. Which of the following is one of the criteria for use of a parametric inferential statistical test?

- A a repeated measures design must have been used
- B the level of data collected must be nominal
- C the means of each condition must be similar
- D the variance in the data in each condition must be similar

Your answer

[1]

105(a). A researcher asked 50 people what their favourite type of food was and obtained the following results:

Type of food	No. of people reporting food as their 'favourite'
meat	10
fish	18
fruit	8
cereals	5
vegetables	9

What percentage of people reported fruit as their favourite?

- A 4%
- B 8%
- C 16%
- D 20%

Your answer

[1]

108.

Sleepy head? It's something we all do at least once a day yet varies a lot between people and can influence many other aspects of our life. The amount of sleep we get and the quality of the sleep can have both physical and cognitive consequences. However, too much sleep may be as bad as not getting enough. There are clearly lots of opportunities here to explore the relationship between sleep and behaviour. One such area of research could be to investigate if there is a correlation between the amount of sleep a person has and their ability to concentrate the next day.

Outline **one** way that some qualitative data could be obtained in this study.

[3]

109(a).

Sleepy head? It's something we all do at least once a day yet varies a lot between people and can influence many other aspects of our life. The amount of sleep we get and the quality of the sleep can have both physical and cognitive consequences. However, too much sleep may be as bad as not getting enough. There are clearly lots of opportunities here to explore the relationship between sleep and behaviour. One such area of research could be to investigate if there is a correlation between the amount of sleep a person has and their ability to concentrate the next day.

Outline **one** way that the external validity of this study could be considered to be high.

[3]

(b). Outline **one** way that the external validity of this study could be considered to be low.

[3]

110.

Sleepy head? It's something we all do at least once a day yet varies a lot between people and can influence many other aspects of our life. The amount of sleep we get and the quality of the sleep can have both physical and cognitive consequences. However, too much sleep may be as bad as not getting enough. There are clearly lots of opportunities here to explore the relationship between sleep and behaviour. One such area of research could be to investigate if there is a correlation between the amount of sleep a person has and their ability to concentrate the next day.

Explain what the term 'demand characteristic' refers to in relation to your study.

[2]

111.

Curious findings. Curiosity can be regarded as simply 'a desire to know things' – having an inquisitive mind. However, some people may be more curious than others. To investigate this a psychologist secretly observed students who were left alone in a room waiting to be interviewed about their experiences at university shortly before they graduated. In the room was a box with a sign in front of it that clearly said, 'do not open the box'.

Type of student	DID open the box	Did NOT open the box
Science	39	21
Arts	15	45
Humanities	8	22

Calculate the percentage of science students who 'did' and 'did not' open the box. Show your workings.

[4]

112.

Curious findings. Curiosity can be regarded as simply 'a desire to know things' – having an inquisitive mind. However, some people may be more curious than others. To investigate this a psychologist secretly observed students who were left alone in a room waiting to be interviewed about their experiences at university shortly before they graduated. In the room was a box with a sign in front of it that clearly said, 'do not open the box'.

Type of student	DID open the box	Did NOT open the box
Science	39	21
Arts	15	45
Humanities	8	22

What was the ratio of arts students who did not open the box to those who did?

[2]**113.**

Curious findings. Curiosity can be regarded as simply 'a desire to know things' – having an inquisitive mind. However, some people may be more curious than others. To investigate this a psychologist secretly observed students who were left alone in a room waiting to be interviewed about their experiences at university shortly before they graduated. In the room was a box with a sign in front of it that clearly said, 'do not open the box'.

Type of student	DID open the box	Did NOT open the box
Science	39	21
Arts	15	45
Humanities	8	22

Draw a fully labelled bar chart to display the data collected in this study.

[4]

Outline **one** ethical issue arising from how data was obtained in this study.

----- [3]

116. Which is an example of interval level data?

- A the mass, in grams, of the brain of an individual with schizophrenia
- B the number of nightmares experienced by an individual with schizophrenia
- C the number of times an individual with schizophrenia has been admitted to hospital
- D the rating of the severity of the delusions experienced by an individual with schizophrenia

Your answer

[1]

117.

A psychologist used an observation to investigate the effect of environment on individuals' need for personal space. They decided to carry out a covert observation in three settings: a nightclub, a college library and the changing room in a leisure centre. Members of the public using the facilities made up the sample. The psychologist observed key behaviours, such as reduced eye contact, defensive body posture and movement away from people.

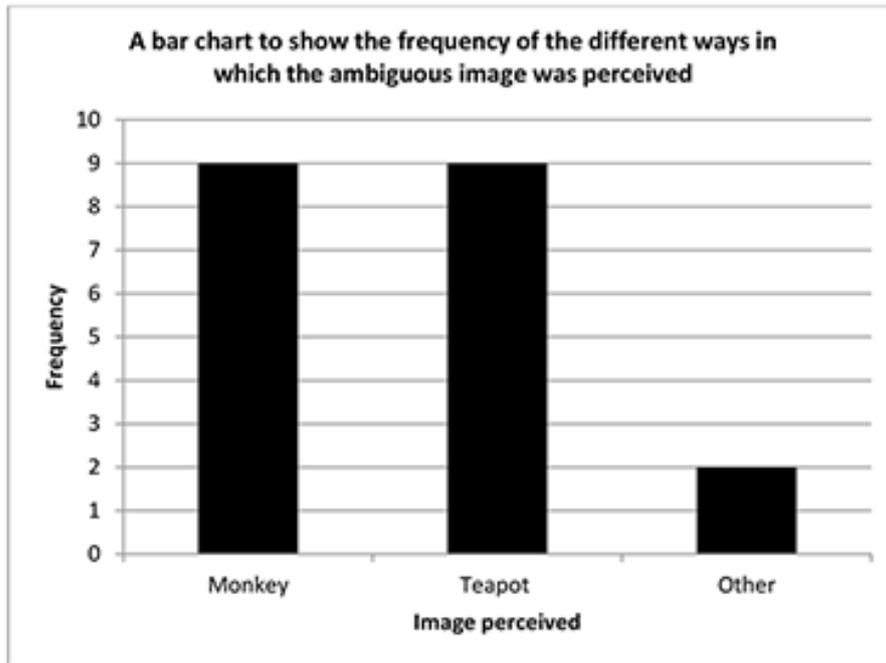
Identify **three** ethical issues that would need to be considered when carrying out this observation.

----- [3]

118(a).

A psychologist tested the effects of expectations on people's perceptions by carrying out the following experiment. The test item was an ambiguous image – an image that had been purposefully drawn to be perceived in one of two ways – either as a monkey or as a teapot. Participants had to say what they saw after they had viewed the image for one second.

Before carrying out the experiment, the psychologist had checked that the ambiguous image could be perceived in one of two ways. His findings, from this check, are presented in the bar chart below:



Identify **two** findings from the bar chart.

[2]

(b).

Explain why a bar chart is appropriate for presenting this data.

[2]

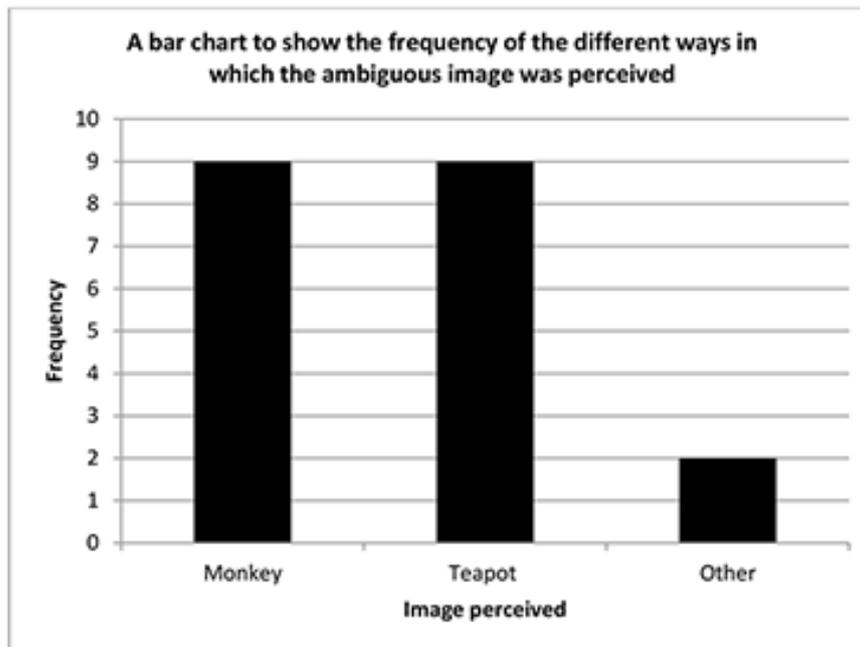
(c). Calculate the percentage number of times that the image was identified as neither a monkey nor a teapot. Show your workings.

[2]

119(a).

A psychologist tested the effects of expectations on people's perceptions by carrying out the following experiment. The test item was an ambiguous image – an image that had been purposefully drawn to be perceived in one of two ways – either as a monkey or as a teapot. Participants had to say what they saw after they had viewed the image for one second.

Before carrying out the experiment, the psychologist had checked that the ambiguous image could be perceived in one of two ways. His findings, from this check, are presented in the bar chart below:



Fifty participants were recruited and then randomly allocated into two groups. In one condition, five drawings of other animals were presented, one after the other, before the ambiguous image. Participants had to name each one of these. In the second condition, the set up was the same but five images of kitchen items were used.

The findings from the study are presented below:

A table to show the number of participants who perceived the ambiguous image as a monkey or as a teapot from both conditions: image presented with animals and image presented with kitchen items

	Perceived as monkey	Perceived as teapot
Presented with animals	15	10
Presented with kitchen items	5	12

Identify and simplify the ratio of the number of participants who perceived a monkey in the first condition and the number who perceived a monkey in the second condition.

[2]

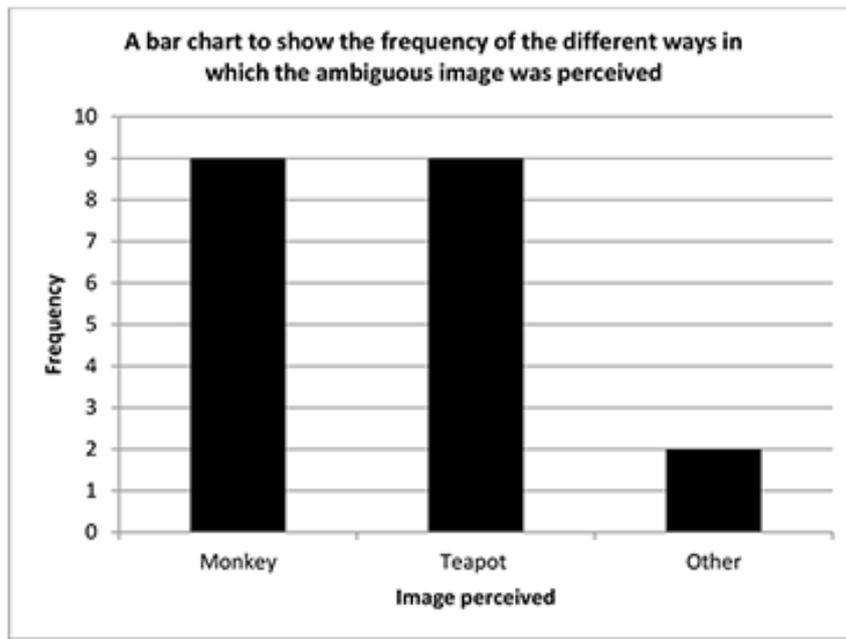
(b). Identify and simplify the ratio of the number of participants who perceived a teapot in the first condition and the number who perceived a teapot in the second condition.

[2]

120.

A psychologist tested the effects of expectations on people's perceptions by carrying out the following experiment. The test item was an ambiguous image – an image that had been purposefully drawn to be perceived in one of two ways – either as a monkey or as a teapot. Participants had to say what they saw after they had viewed the image for one second.

Before carrying out the experiment, the psychologist had checked that the ambiguous image could be perceived in one of two ways. His findings, from this check, are presented in the bar chart below:



Fifty participants were recruited and then randomly allocated into two groups. In one condition, five drawings of other animals were presented, one after the other, before the ambiguous image. Participants had to name each one of these. In the second condition, the set up was the same but five images of kitchen items were used.

The findings from the study are presented below:

A table to show the number of participants who perceived the ambiguous image as a monkey or as a teapot from both conditions: image presented with animals and image presented with kitchen items

	Perceived as monkey	Perceived as teapot
Presented with animals	15	10
Presented with kitchen items	5	12

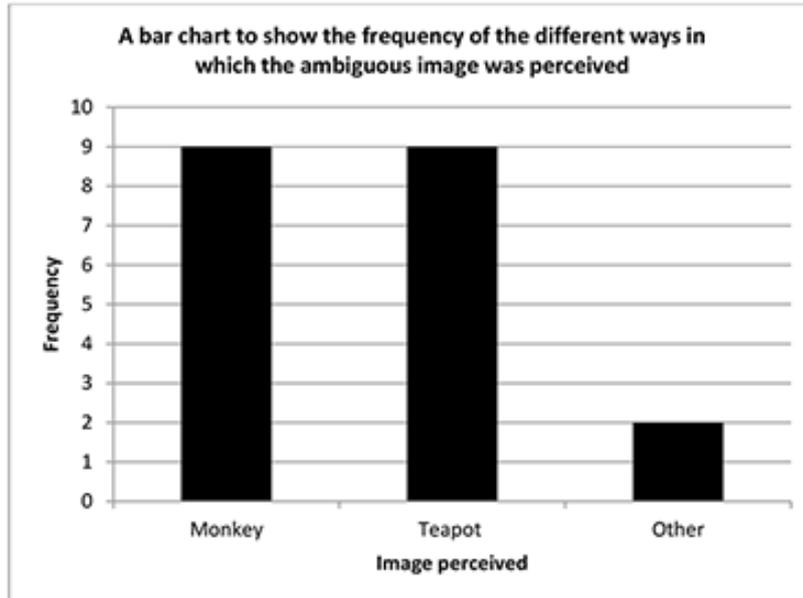
The psychologist analysed the data using the Chi Squared test. Give **two** reasons for this choice of test with reference to the study.

[4]

121.

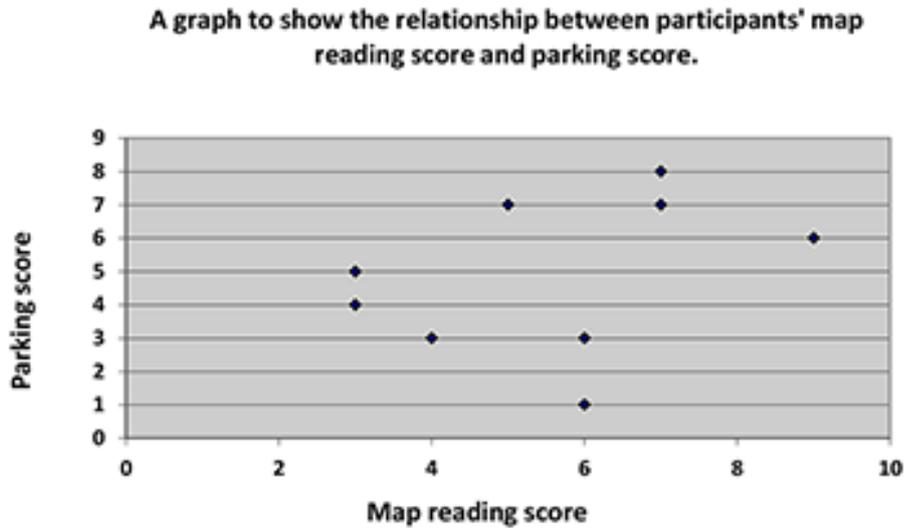
A psychologist tested the effects of expectations on people's perceptions by carrying out the following experiment. The test item was an ambiguous image – an image that had been purposefully drawn to be perceived in one of two ways – either as a monkey or as a teapot. Participants had to say what they saw after they had viewed the image for one second.

Before carrying out the experiment, the psychologist had checked that the ambiguous image could be perceived in one of two ways. His findings, from this check, are presented in the bar chart below:



Fifty participants were recruited and then randomly allocated into two groups. In one condition, five drawings of other animals were presented, one after the other, before the ambiguous image. Participants had to name each one of these. In the second condition, the set up was the same but five images of kitchen items were used.

123. Look at the following scatter diagram:



Which is the best estimate of the correlation coefficient for the above data?

- A 0.7
- B 0.4
- C 0.3
- D 0.8

Your answer

[1]

124. What is a weakness of using a mode as a measure of central tendency?

- A it can generate a number not in the data set
- B it is easily affected by outliers
- C it is not suitable for nominal data
- D it relies on a score occurring more than once

Your answer

[1]

125. Which is a requirement of a parametric test?

- A data is at least ordinal level
- B mean scores are significantly different
- C sample is drawn from a skewed population
- D standard deviations are not significantly different

Your answer

[1]

126. In Bandura's (1961) Bobo doll study, the participants were pre-tested to assess their aggression levels.

What was the main purpose of his procedure?

- A to allow for a matched pairs design
- B to exclude children who were especially aggressive
- C to help to decide on the sex of the role model for each participant
- D to measure the change in aggression before and after the experiment

Your answer

[1]

127. Look at the following data set from a condition where participants were timed (in seconds) completing a task in a crisis situation.

{36 45 51 67 54 19 50 45 27 76 54 45}

What is the range of this data set?

- A 45
- B 47.5
- C 58
- D 76

Your answer

[1]

128. What is meant by the term 'socially desirable responses' in psychological research?

- A responses which are personal even if they are subjective
- B responses which are reliable even if they are invalid
- C responses which reflect the participants' wishes even if they are unacceptable to others
- D responses which the participants think they ought to give even if they are not true

Your answer

[1]

129. Which is an example of qualitative data?

- A the diary entries of six patients suffering from schizophrenia
- B the length of time each participant spent reading a list of words
- C the modal colour chosen by extroverts
- D the percentage of respondents who agreed with capital punishment

Your answer

[1]

130. What is the probability of a significant result occurring by chance where the significance level is $p \leq 0.025$?

- A 2.5% or less

- B** 25% or less
- C** at least 97.5%
- D** less than 2.5%

Your answer **[1]**

131. Which inferential test should a researcher use to decide whether a correlation is significant?

- A** Binomial Sign test
- B** Mann–Whitney U test
- C** Spearman’s Rho test
- D** Wilcoxon Signed Ranks test

Your answer **[1]**

132.

Stand to attention. An educational psychologist conducted a study to investigate if getting pupils to stand up when completing some of their work in class increased their performance by making them concentrate more. An independent measures design experiment was used testing a small group of 12 pupils. Half of the class stood up at their desks whilst completing a maths test whilst the others remained seated. The data obtained from the study is presented in the table below.

Score on maths test (max 20) when stood up or sat down when taking the test			
Stood up		Sat down	
participant	score	participant	score
1	18	1	14
2	20	2	8
3	17	3	20
4	15	4	4
5	18	5	15
6	19	6	12

Outline **one** advantage and **one** disadvantage of having quantitative data in this study.

----- [4]

133(a). The table below displays the data from an experiment investigating the difference in memory ability of a group of young and old people.

Scores in a memory test for words (max 30) by young and old people			
Young people (age 16–25)		Old people (age 65–75)	
participant	score	participant	score
A	26	a	7
B	28	b	25
C	22	c	12
D	30	d	22
E	25	e	12
F	28	f	12

What is the mode for the number of words recalled by the young group?

- A 12
- B 26
- C 27
- D 28

Your answer

[1]

(b). What would be the value of 'n' in the formula below to calculate the standard deviation (SD) of the memory scores for the group of old people in this study?

$$SD = \sqrt{\frac{\sum(x - \bar{x})^2}{n}}$$

- A 6
- B 8
- C 12
- D 15.5

Your answer

[1]

(c). What is the mean for the number of words recalled by the old group?

- A 12
- B 15
- C 18
- D 26.5

Your answer

[1]

(d). What would be the appropriate inferential statistical test to use to analyse the data from this study?

- A Chi-square test
- B Mann-Whitney U test
- C Sign test
- D Wilcoxon Signed Ranks test

Your answer

[1]

134. What is the symbol for 'much less than'?

- A $<$
- B $<<$
- C $=$
- D $==$

Your answer

[1]

135. What type of reliability is it when there is a consistency in the recordings made by two or more different observers?

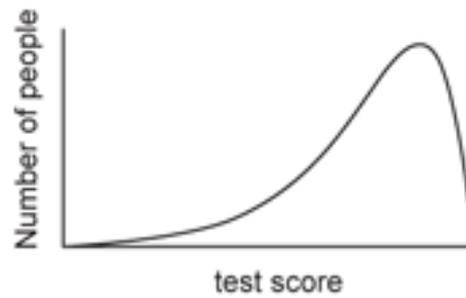
- A external
- B inter-rater
- C split half
- D test-retest

Your answer

[1]

136(a).

What type of distribution is shown in the graph below displaying the results of how people performed in a general knowledge quiz?



- A negatively skewed
- B normal
- C positively skewed
- D symmetrical

Your answer

[1]

(b). What can be said about people's general knowledge from this graph?

- A most people had a high general knowledge score
- B most people had a low general knowledge score
- C overall, people's general knowledge is about the same
- D there was about the same number of people who scored high as scored low

Your answer

[1]

137. What type of inferential statistical tests assume that the data used in the analysis are drawn from a normally distributed population?

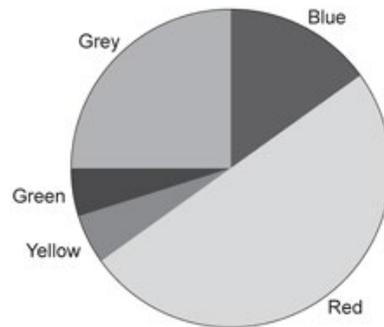
- A parabolic
- B parallel
- C parametric
- D paranormal

Your answer

[1]

138. The pie chart below displays the data from a sample of 200 people asked what their favourite colour is. How many people said grey was their favourite colour?

- A** 25
B 50
C 75
D 90



Your answer

[1]

139(a). The table below presents some data from Milgram's study of obedience showing what the maximum shock was that people delivered. All participants continued up to 300 volts, at which stage 5 people dropped out.

Voltage level	Number of participants for whom this was the maximum shock given
300	5
315	4
330	2
345	1
360	1
375	1
390	0
405	0
420	0
435	0
450	26

What percentage of participants gave a final shock of 315 volts?

- A** 1.6%
B 4%
C 8%
D 10%

Your answer

[1]

(b). What was the total percentage of participants who were 'disobedient' (i.e. did not give a shock of 450 v)?

- A 5.6%
- B 14%
- C 35%
- D 65%

Your answer

[1]

140. Which of these is an ethical consideration when conducting psychological research?

- A integration
- B integrity
- C intercourse
- D interrogation

Your answer

[1]

141. Which of the following would assess the internal reliability of a questionnaire used by a psychologist in their research?

- A comparing responses to questions asking different things
- B comparing responses to questions asking the same things
- C comparing responses to questions by two different people
- D comparing responses to questions from a different test

Your answer

[1]

142.

Stand to attention. An educational psychologist conducted a study to investigate if getting pupils to stand up when completing some of their work in class increased their performance by making them concentrate more. An independent measures design experiment was used testing a small group of 12 pupils. Half of the class stood up at their desks whilst completing a maths test whilst the others remained seated. The data obtained from the study is presented in the table below.

Score on maths test (max 20) when stood up or sat down when taking the test			
Stood up		Sat down	
participant	score	participant	score
1	18	1	14
2	20	2	8
3	17	3	20
4	15	4	4
5	18	5	15
6	19	6	12

Identify **two** findings from the data presented in this table.

-----**[4]**

143. What is the symbol for ‘much greater than’?

- A <
- B <<
- C >
- D >>

Your answer

[1]

144. If a researcher checks to see if participants have answered questions that ask about the same thing in the same or similar way, what is this?

- A external reliability
- B external validity
- C internal reliability
- D internal validity

Your answer

[1]

145. What term refers to whether research relates to everyday life?

- A ecological validity
- B face validity
- C internal validity
- D population validity

Your answer

[1]

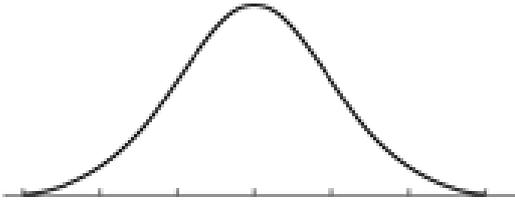
146. Which of these descriptive statistics would it be possible to use with nominal data?

- A mean
- B median
- C mode
- D range

Your answer

[1]

147. What type of distribution is this?



- A bimodal
- B negatively skewed
- C normal
- D positively skewed

Your answer

[1]

148. Which of these is not a measure of dispersion?

- A mean
- B range
- C standard deviation
- D variance

Your answer

[1]

149.

Do like me. The extent to which people mimic each other's behaviour (e.g. fold arms at the same time) is often regarded as an indicator of how well they are getting on together, especially if in a romantic relationship. A psychologist wants to conduct a study using the observation method to investigate this by studying the behaviour of couples having a drink in a bar. Behaviour was observed every 10 minutes during a period from 8 pm to 10 pm.

What does inter-rater reliability refer to in this study?

[3]

150.

Funny research. Laughing can be good for us and make us feel better in many ways but psychologists do not know much about why people laugh or what people find funny or why. To investigate this a psychologist used the self-report method to ask people questions about their experiences of laughing and what they find funny. Some of the data that was collected is presented below.

Do you like it when people play practical jokes on you?	
'yes'	'no'
120	80

Do you laugh with your mouth open?		
	'yes'	'no'
males	63	17
females	38	22

Findings when people were asked which category of jokes do you find the funniest	
Category	Number of people
technology	15
health	35
work	10
family	30
news	20
sex	50

What is the ratio of people who like it when practical jokes are played on them to those that do not? Present your answer in its simplest form and show your workings.

[2]

END OF QUESTION PAPER