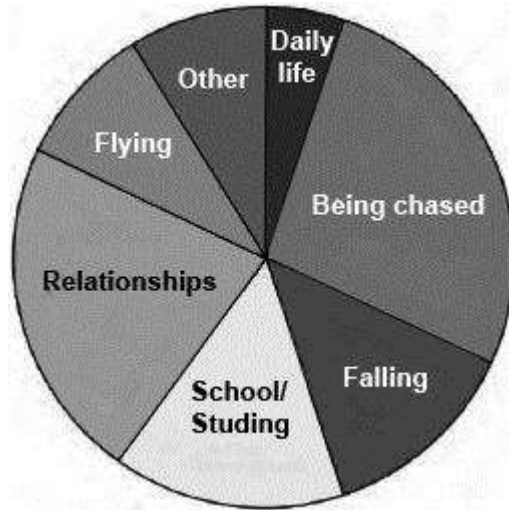


Q1.

A psychologist was reading an article about typical dream themes in adults.

The pie chart below shows the main dream themes identified in the article.

Main dream themes



(a) Using the pie chart above, estimate the percentage of dreams that were reported to be about being chased. Shade **one** box only.

- A 4%
- B 12%
- C 27%
- D 42%

(1)

The psychologist was interested in finding out whether dream themes differed between males and females, particularly in terms of social interaction. She decided to conduct a pilot study. Twenty undergraduate students (8 male and 12 female) volunteered for the study. For a six-week period the students were interviewed at 9 am each morning when they arrived at university. Interviewers, who did not know the purpose of the study, carried out and recorded the dream interviews.

(b) What is meant by a pilot study? Explain **one** possible reason why the psychologist decided to conduct a pilot study for this investigation.

(3)

(c) The interviews produced qualitative data.

What is meant by qualitative data?

(2)

When comparing the data for males and females, the psychologist found that there was a difference in the proportion of friendly and aggressive social interactions. This is shown in the table below.

Percentage of friendly and aggressive social interactions in dreams reported by males and females

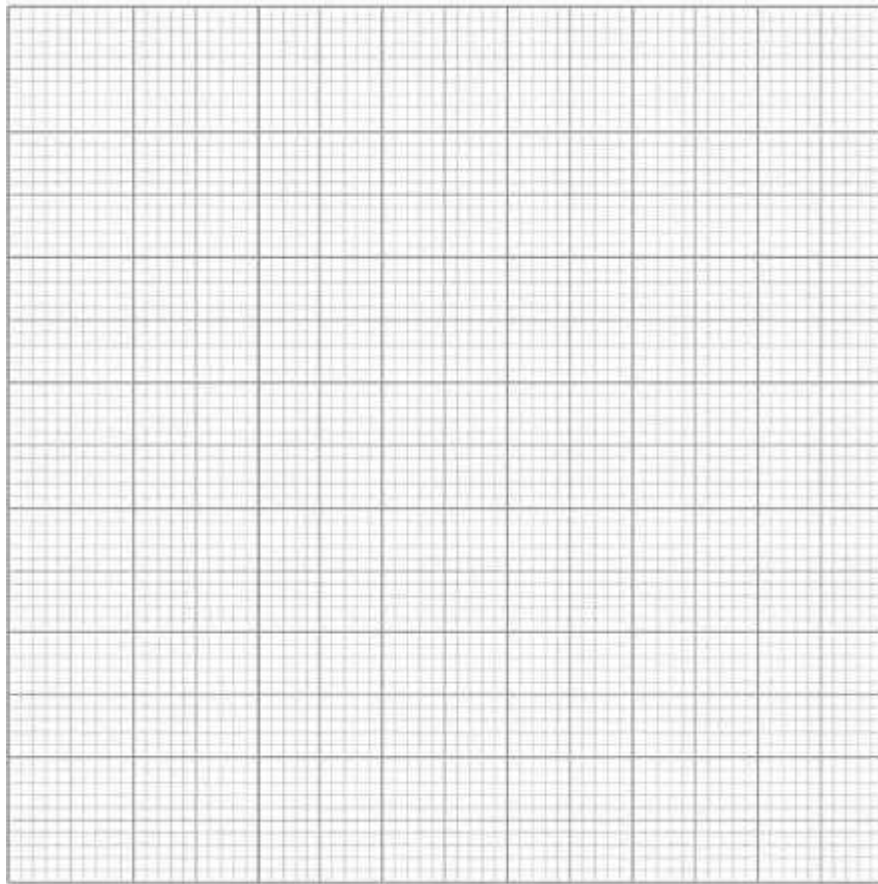
| | Males | Females |
|-------------------|--------------|----------------|
| Friendly | 40% | 56% |
| Aggressive | 60% | 44% |

(d) A total of 375 dreams reported by males included social interaction. Use the data in the table above to calculate how many of these dreams reported by males were classified as aggressive. Show your workings.

(2)

- (e) Draw a suitable graphical display to represent the data in the table above. Label your graph appropriately.

Title: _____



(4)

Q2.

A psychologist was at a concert where someone threw a bottle onto the stage and seriously injured one of the band members. The psychologist decided to use this incident to investigate the accuracy of eye witness testimony. She asked 10 people who saw the bottle being thrown, if they would allow her to interview them about this. A week later she interviewed each witness separately in a quiet room and asked them the same closed questions about what they had seen. She recorded their answers. It took her two and a half hours in total to interview the 10 witnesses.

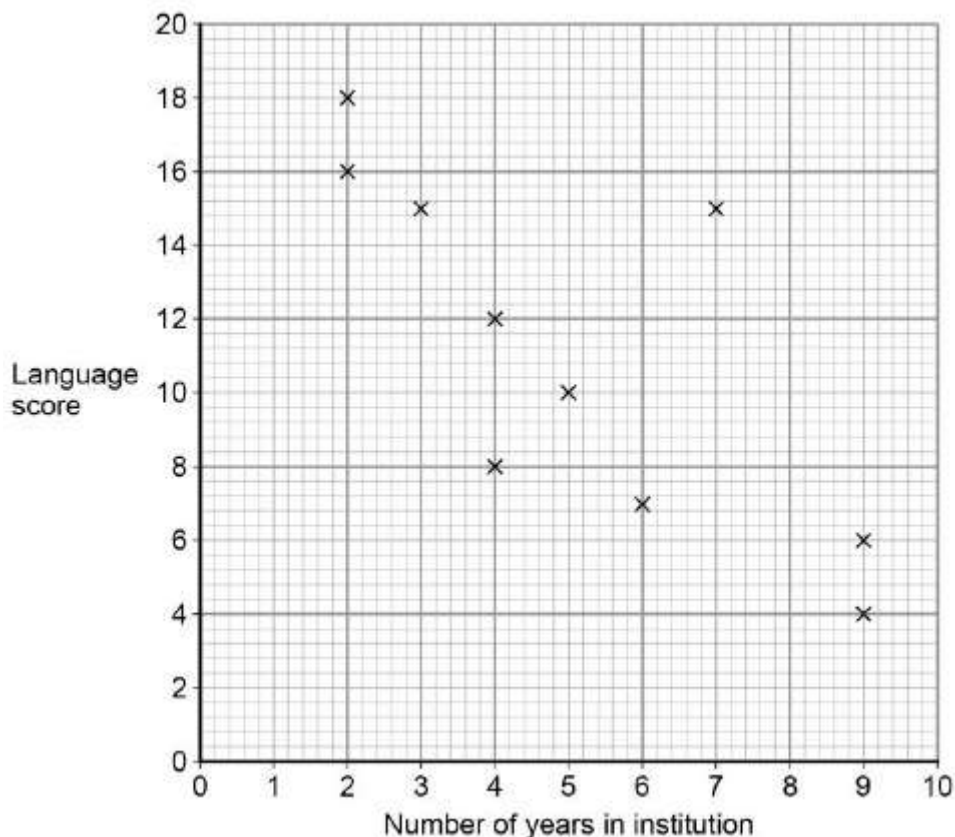
- (a) Calculate how many hours it would have taken the psychologist to interview all 1000 people who were at the event. Show your workings.

(2)

Q3.

A psychologist thinks that there may be a link between language ability and institutionalisation. She tests the language skills of 8-year-old institutionalised children. A high score on the test indicates good language ability and a low score on the test indicates poor language ability. She also records the number of years that each child has been institutionalised. The findings are shown in the figure below.

The relationship between time spent in institution and language score



(b) Identify the type of graphical display in the figure. Shade **one** box only.

- A Histogram
- B Bar graph
- C Line graph
- D Scattergram

(1)

(c) How many children took part in the study?

(1)

(d) What does the pattern of data in the figure suggest about language ability and institutionalisation?

(2)

(e) Calculate the range for the language scores. Show your workings.

(2)