1. Tracy is looking to move phone company. She asks 18 of her friends which phone company they are with. The results were as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Chat Chat | Ground | Chat Chat | Chat Chat | O! | Ground |
| Ground | Ground | Chat Chat | Ground | D2 | Chat Chat |
| Ground | D2 | D2 | O! | Chat Chat | Chat Chat |

|  |
| --- |
| (a) Summarise the results in a frequency table. |
| (b) Construct an appropriate graph to display the results. Remember your titles. |
| (c) A funding company has offered to give one of the companies more money to advertise. Which company should the funding company chose. Give a reason for your answer. |

2. The average line speed for the two companies each month is shown in the line graph below:

a) Calculate the mean line speed for (i) Chat Chat (ii) Ground

b) Calculate who has the greater range of line speeds.

c) Tracy wants to pick the company which has the most consistent line speed. Which should she go for and why?

3. Tracy has asked some of her friends for their average line speed and also how far they are from the telephone exchange. The table below shows the results.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Alice** | **Bob** | **Charlie** | **David** | **Erin** | **Fred** | **George** | **Henry** |
| **Line Speed** | 32 | 75 | 45 | 60 | 62 | 41 | 58 | 36 |
| **Distance (miles)** | 18 | 2 | 15 | 5 | 7 | 14 | 8 | 20 |

(a) Create a scattergraph on squared paper to show the line speed and distance from the exchange for each of her friends.

(b) Describe the correlation between the line speed and the distance from the exchange.

(c) Draw a line of best fit and use this to predict the line speed of a house 10 miles away from a telephone exchange.