Assignment Title	Scatter Graphs and Correlation	Date set	Spring 2	Hours	15
Summary of Unit 4			**Key Words**		
Interpret and construct scatter graphs. Know and apply words associate word with correlation. Be able to draw and find an equation for the line of best fit. Be able to calculate and interpret Spearman's Rank and Pearson's Rank Correlation Coefficient.			Analyse, construct, scatter graph, scatter diagram, interpret, line of best fit, plot, formula, Spearman's Rank, Pearson's Rank, correlation, coefficient, positive, negative, zero, causation, association interpolation and extrapolation		

Prior Knowledge

On another day the maximum temperature was 6 °C and 35 hot chocolate drinks were sold.

(a) Show this information on the scatter graph.

(b) Describe the relationship between the maximum temperature and the number of hot chocolate drinks sold.

(c) Draw a line of best fit on the scatter diagram.

One day the maximum temperature was 8 °C.

(d) Use your line of best fit to estimate how many hot chocolate drinks were sold.

LEARNING JOURNEY

Level	Task Description
2-3	Know when it is appropriate to draw **scatter graphs** for data Know to plot the dependant variable on the y axis
3-4	**Draw, read and interpret scatter graphs**
3-4	Know and apply vocabulary of **correlation** Describe and make comparisons of correlation by inspection
4-6	Know that correlation does not imply causation and **determine which is causation**
4-6	Determine **line of best fit by eye and by drawing through a calculated mean point** **Use a line of best fit to make predictions**
5-6 (H)	**Find the equation of the line of best fit.** **Draw a line of best fit by using the equation.** Interpret the value of the gradient of the regression line.
4-5	**Interpret given Spearman's rank correlation coefficient** in the context of the problem
5-6 (H)	Apply formula to calculate **Spearman's rank correlation coefficient**.
6-7 (H)	**Interpret given Pearson's product moment correlation coefficient**
8 (H)	Understand **the distinction between Spearman's rank correlation coefficient and Pearson's product moment correlation coefficient**