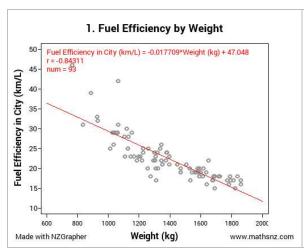**Part 4.8: Predictions**

As well as interpreting the regression line we need to use this line to make **at least two** predictions and comment on how reliable we think the predictions are based on the strength of the relationship and the scatter on the graph close to the point we are predicting.

In order to do this you need to substitute two different values into the equation. With bivariate data we can only safely make predictions inside our data range, so your predictions should be able to be plotted on your graph. It is also vital that you **round the prediction sensibly** (usually the same as the original data for that variable was rounded to).

You could expand on this further by discussing the confidence in the predictions in depth or linking this to the residuals (see section later on). You could also reflect on how relevant these predictions are.

Make two predictions inside the data range for each of the sets of data, the first one has been done for you.

-0.017709 × 1200 + 47.048 = 26.7972
Based on my regression line I would predict that a car that weighs 1200 kg would have a fuel efficiency of approximately 27 kilometres per litre. I am / am not confident in this prediction because...

-0.017709 × 1600 + 47.048 = 18.7136
Based on my regression line I would predict that a car that weighs 1600 kg would have a fuel efficiency of approximately 19 kilometres per litre. I am / am not confident in this prediction because...