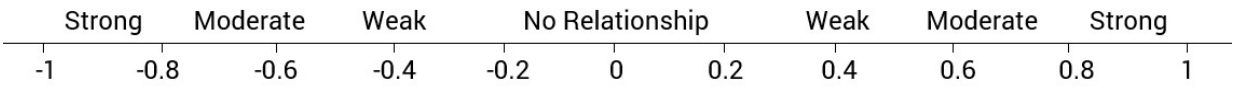
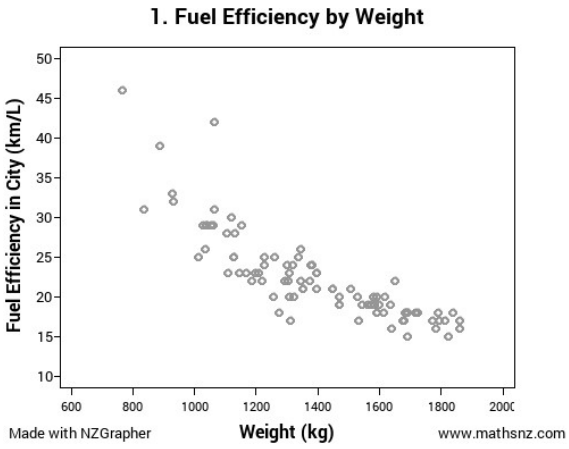
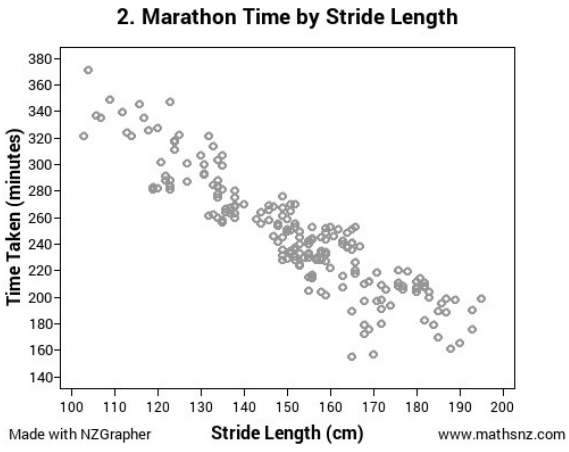
Part 4.3: Relationship

The statement about the relationship is about justifying the strength of the trend that **you can see** on your graph. It is important that you are commenting on what **you can see**. You can use the correlation coefficient (r-value) to **back up** your strength statement, but it should only be used as a backup… **what you can see** is the most important.

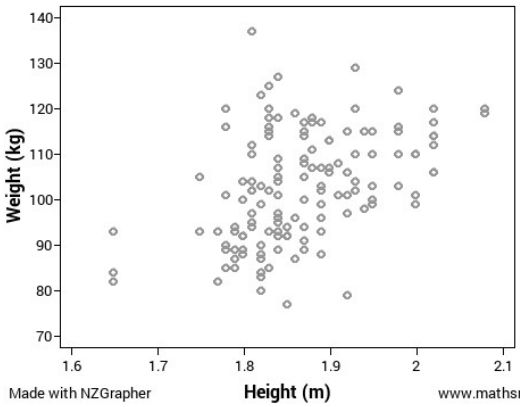
The r-value is a number between -1 and 1 indicating how strong the relationship is. The closer it is to 1 or -1 the stronger the relationship is, and the closer it is to zero the weaker the relationship is. A positive r-value indicates that the trend is positive, a negative r-value indicated the trend is negative.
The number line below is **just a guide**, remember what you can see with your eyes is most important.



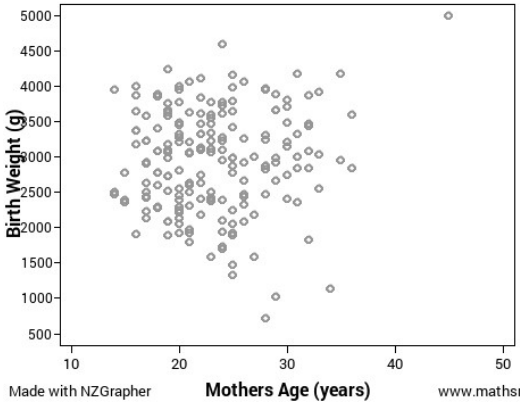
Discuss the relationship for each of the sets of data, the first one has been done for you.

	The relationship is strong and linear as I can see most the points form a fairly consistent pattern. This is confirmed by the correlation coefficient of -0.8431, indicating that the linear relationship is quite strong as r is between -0.75 and -1.
	

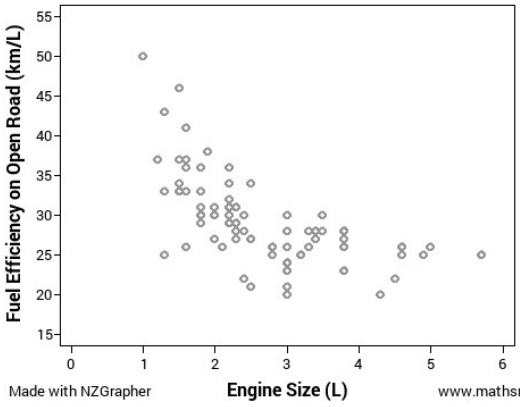
3. Rugby Players Weight by Height



4. Babies Birth Weight by Mother's Age



5. Fuel Efficiency by Engine Size



6. Diamond Price by Size