Part 1:

1. <https://www.desmos.com/calculator/lorexklzg2> :The grade 12 average is on the x-axis because it is the independent variable. It is independent because it is the variable used to predict the mark for the first year of college.
2. This data is a positive correlation, it is a strong correlation.
3. The equation of the line of best fit is y=0.91x+1.83
4. The line of best fit, fits the dots not too bad. It doesn't actually touch any of them and there are a few outliers but it does match the correlation of the dots well.
5. The outliers in this graph are, (85, 83) (74, 74) (82, 73). These would represent students marks that did not change on average the same as the rest.
6. If a student had a grade 12 average of 81 it is likely that their first year average would be 75.

Part 2:

1. <https://www.desmos.com/calculator/nby6uee9wn> :The equation for the line of best fit is y=6.13x+12061.7
2. The line of best fit, fits the correlation well but the dots from the starting salary are far away.
3. Based on the line of best fit if there were 300 graduated in 2011 I would predict that there would be 250 hired upon graduation.
4. Every dot graphing the salaries of the students is an outlier because they are so different from the number of graduates. I think it would be justified deleting this data from the chart. Because the numbers are so different there should be a separate graph showing starting salary.
5. The new line of best fit has the equation, y=2.63x+-507475.
6. Based on the new equation if there were 300 graduates in 2011 only about 240 would be hired.
7. I think the second line of best fit is more reliable because it removes the outliers and makes a more consistent and predictable line.
8. The first line of best fit gives a more optimistic prediction of the number hired in 2011.
9. The predictions of the number hired is an extrapolation because it is outside of the points already plotted on the graph so I am assuming that the graph will continue it’s climb along the line of best fit.

Part 3:

Variable that haven't been graphed yet: Year vs. Total Number of Graduates, Year vs. Mean Starting Salary, Year vs. Number Hired Upon Graduation, Total Numbers of Graduates vs. Mean Starting Salary, Number Hired Upon Graduation vs. Mean Starting Salary.

<https://www.desmos.com/calculator/lu75ev3rd6> : The line of best fit is very close to all the dots. The correlation of the graph is positive and increases very quickly.

<https://www.desmos.com/calculator/lp0yqkeln1> : The correlation in this one is also positive and increases rapidly. This line of best fit has 2 outliers though.

<https://www.desmos.com/calculator/rzcpywjjxm> : The correlation for this graph is positive but it increases and a much slower rate than the other two. The line of best fit matches the plotted points pretty well and does not have any outliers.