

Statistical Analysis of GCSE results at my secondary school summer 2010

Introduction

For my maths project, I requested for the summer 2010 GCSE Exam results from St Bede's secondary school Exam moderator; so as to analyse it. Having received the data, I made the names of the students anonymous, to keep their information private. I kept the data in alphabetical order so that my hypothesis would make sense. I identified the gender for the 186 students that wrote the exam; which took a lot of time to get the data ready and to make it private.

I had to search on the internet for the equivalent GCSE grade points so that I could change the grades to points so as to have a good set of data for my analysis. My hypothesis for my maths project base on the GCSE result summer 2010 is the lower down you are in the alphabetical order of the registration the less you do well in the exams and by that having low GCSE results at the end, while the higher up you are in the register the better you do and having a good GCSE result at the end.

So by my hypothesis the graphs that I am going to produce base on my data results should have a negative trend (line of best fit) and for it to have a negative trend showing my hypothesis, what I did was numbered the students starting from the last student on the alphabetical order in the register numbering him/her number 1 and numbering the first student on the alphabetical order register number 186.

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The table below shows what point are equivalent to each different GCSE when converted for example an A* has the point of 58 when converted, and the screen shot shows how I came about into changing all the GCSE grades into equivalent point numbers.

The equivalent GCSE grade points



A*	58
A	52
B	46
C	40
D	34
E	28
F	22
G	16
U	0

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This data is part of the main data showing just the English Language & Literature GCSE points for each student. I am going to compare the total score for each child against their alphabetical order numbering to see if we get any correlation and to prove if my hypothesis is right or wrong.

Scope: National Curriculum Year
 Export Date : 10/06/2011

Name	Entries	English Language & Literature	FEMALE GENDER	MALE GENDER	Total score	Alphabetic Position
Number of Results		181				
Ab	9	34		m	34	181
Ab	9	40		m	40	180
An	8	28		m	28	179
Ar	9	40	f		40	178
Ar	9	40	f		40	177
Ba	9	40	f		40	176
Ba	8	52	f		52	175
Ba	10	46	f		46	174
Be	11	40	f		40	173
Be	10	40		m	40	172
Bi	10	40		m	40	171
Bi	8	40		m	40	170
Bo	8	52		m	52	169
Br	10	40		m	40	168
Br	12	46	f		46	167
Br	8	46		m	46	166
Bu	11	40		m	40	165
Bu	10	58		m	58	164
Bu	10	40	f		40	163
Bu	9	46		m	46	162
Bu	9	52	f		52	161
Ca	9	46	f		46	160
Ca	10	58	f		58	159
Ca	10	52		m	52	158
Ca	6.5	28		m	28	157
Ch	7.5	28		m	28	156
Ch	8	40	f		40	155
Cl	10	46	f		46	154

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Cl	9	40			m	40	153
Cl	11	52	f			52	152
Co	10	40	f			40	151
Co	8	40			m	40	150
Co	6.5	28			m	28	149
Co	10	40	f			40	148
Co	9	52	f			52	147
Co	9	46	f			46	146
Co	10	40			m	40	145
Cr	9	46	f			46	144
Cr	10	40	f			40	143
Cu	10	34			m	34	142
Da	7.5	34			m	34	141
Da	8	40	f			40	140
Da	8.5	34			m	34	139
De	9	58	f			58	138
Do	8.5	34			m	34	137
Ed	10	40	f			40	136
Eg	9	46	f			46	135
El	9	46			m	46	134
En	8	58			m	58	133
Ev	9	46	f			46	132
Fa	10	46			m	46	131
Fr	8	58			m	58	130
Fa	9	52	f			52	129
Fe	10	46	f			46	128
Fi	7.5	34			m	34	127
Fl	10	46	f			46	126
Fo	8	34	f			34	125
Fo	8.5	28			m	28	124
Fo	12	40	f			40	123
Ga	11	52	f			52	122
Ge	9	46	f			46	121
Ge	9	46			m	46	120
Go	10	58			m	58	119
Go	12	46	f			46	118
Gr	8.5	40			m	40	117
Gr	10	40			m	40	116
Gr	9	40	f			40	115
Gu	10	52	f			52	114
Ha	10	52			m	52	113
Ha	10	46			m	46	112
Ha	10	52	f			52	111
Ha	8	58	f			58	110
He	10	40			m	40	109
Hi	9	46			m	46	108
Ho	10	40			m	40	107
Hu	7.5	34			m	34	106
Hu	9	52			m	52	105
Iw	11	46	f			46	104
Ja	10	46	f			46	103
Ja	9	40	f			40	102

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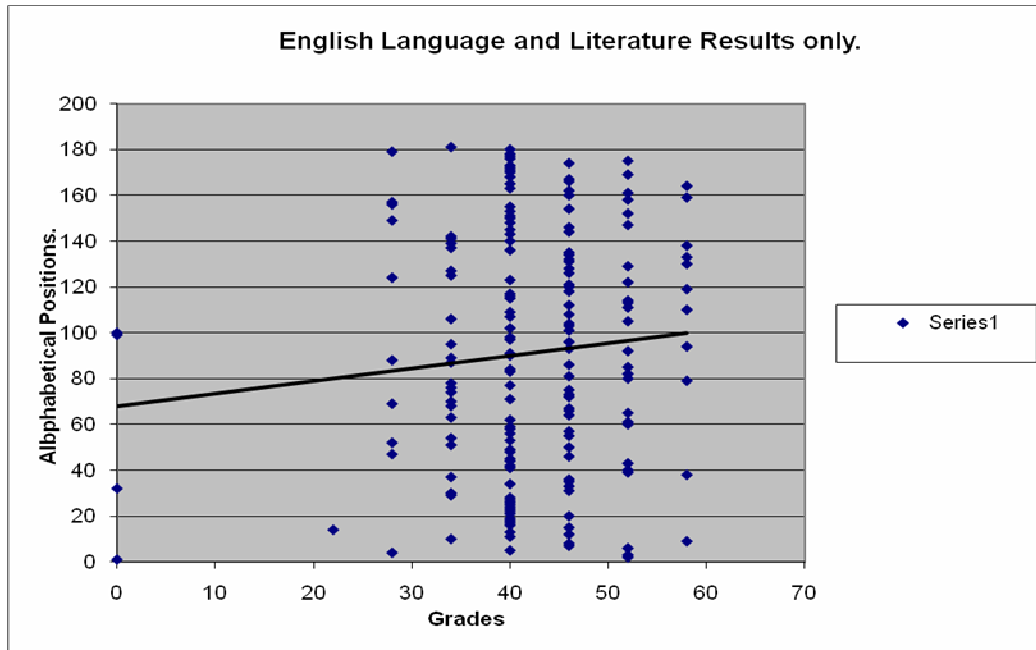
Ja	9	46			m	46	101
Jo	9	0			m	0	100
Jo	10	0			m	0	99
Ke	11	40			m	40	98
Ki	8	40			m	40	97
Kr	9	46			m	46	96
La	8	34	f			34	95
La	8	58	f			58	94
La	11	46	f			46	93
Le	12	52	f			52	92
Le	9	40	f			40	91
Le	9	40			m	40	90
Le	10	34	f			34	89
Li	8	28			m	28	88
Lo	9	34			m	34	87
Lo	10	46	f			46	86
Ma	9	52			m	52	85
Ma	10	40	f			40	84
Ma	9	40			m	40	83
Ma	9	52	f			52	82
Ma	8	46	f			46	81
Ma	8	52	f			52	80
Ma	12	58	f			58	79
McC	8	34			m	34	78
McC	9	40			m	40	77
McG	10	34			m	34	76
McG	9	46			m	46	75
McM	9	34			m	34	74
McMi	9	46	f			46	73
Mi	10	46	f			46	72
Mi	11	40			m	40	71
Mi	10	34			m	34	70
Mi	8.5	28	f			28	69
Mi	8	34			m	34	68
Mo	10	46	f			46	67
Mo	10	46	f			46	66
Mo	9	52	f			52	65
Mo	9	46			m	46	64
Mo	9	34			m	34	63
Mo	9	40			m	40	62
Mo	10	52			m	52	61
Mo	9	52	f			52	60
Na	9	40			m	40	59
Na	10	40			m	40	58
Ne	9	46			m	46	57
Ne	10	40			m	40	56
Ng	11	46			m	46	55
Nu	8.5	34			m	34	54
O'D	10	40			m	40	53
O'D	8	28			m	28	52
Ol	11	34			m	34	51
Or	9	46	f			46	50

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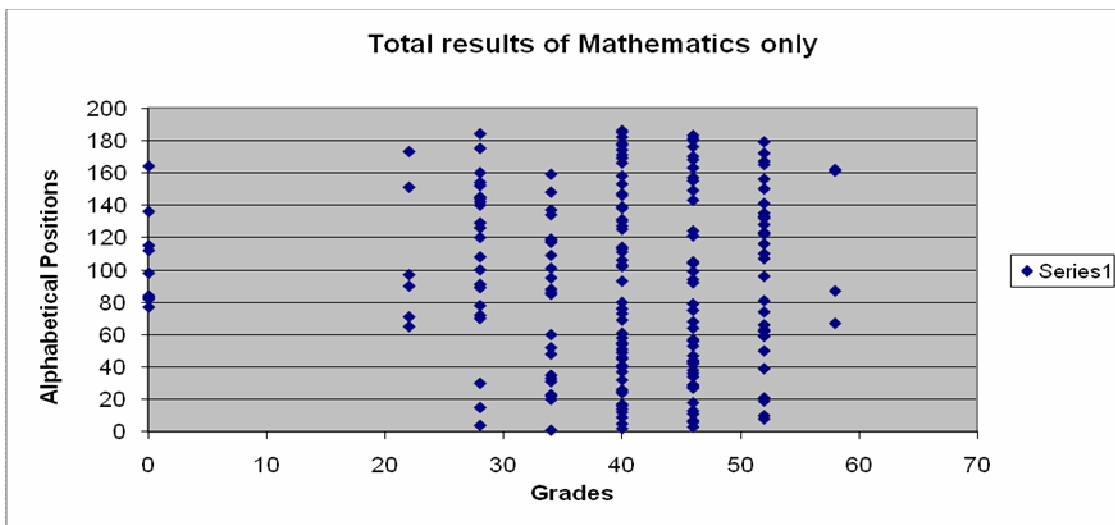
Pa	9	40			m	40	49
Ph	10	40			m	40	48
Po	10	28			m	28	47
Po	11	46			m	46	46
Re	8	40			m	40	45
Re	9	40	f			40	44
Ri	11	52			m	52	43
Ro	9	40			m	40	42
Ro	9	40			m	40	41
Ro	9	52	f			52	40
Ro	10	52			m	52	39
Ro	9	58			m	58	38
Ru	7	34			m	34	37
Ru	11	46			m	46	36
Sa	10	46			m	46	35
Sa	7	40	f			40	34
Sc	10	46	f			46	33
Se	9	0			m	0	32
Sh	12	46	f			46	31
Si	10	34	f			34	30
So	10	34	f			34	29
St	9	40			m	40	28
Sw	9	40			m	40	27
Sz	10	40			m	40	26
Te	10	40	f			40	25
Th	10	40			m	40	24
Ti	11	40	f			40	23
To	10	40	f			40	22
To	10	40	f			40	21
Tu	10	46	f			46	20
Va	10	40			m	40	19
Vi	9	40	f			40	18
Wa	9	40			m	40	17
Wa	10	40	f			40	16
Wa	9	46	f			46	15
Wa	6.5	22			m	22	14
Wa	9	40			m	40	13
Wa	10	46			m	46	12
We	9	40	f			40	11
We	10	34			m	34	10
We	9	58	f			58	9
Wh	10	46			m	46	8
Wh	9	46	f			46	7
Wi	11	52	f			52	6
Wi	10	40			m	40	5
Wi	10	28			m	28	4
Wo	8	52			m	52	3
Wo	11	52			m	52	2
Wr	10	0			m	0	1

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This graph is showing the grades against the Alphabetical positions base on English Language and Literature results only. The line of best fit on this graph is useless because we can't see any correlation so the line does not make any sense which has proved that it doesn't matter where your name is on the alphabetical list it depends on how you work hard.



This is the same kind of graph like my first (the one above) graph but this graph is showing the grades against the Alphabetical positions base on Mathematic results only and as we can see on the graph there isn't any trend (line of best fit) on the graph, so placing one there will be useless.



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After seeing that the two graphs I have just made disprove my hypothesis already I decided to now create graphs that are against different subjects with the main 3 subjects which are Maths, English Language & Literature and Religious studies than using the alphabetical numbering that I assign on each student.

The data below shows the total grade point score of each student both on their maths and English Language/Literature also with the calculated correlation but without adding the students that had 0 on their grade points in total.

Result
 Broadsheet:
 Summer Season
 2010
 Qualification:
 GCSE
 Scope: National
 Curriculum Year
 Export Date :
 10/06/2011

Name	Entries	English Language & Literature	Mathematics	FEMALE GENDER	MALE GENDER	Total score	Alphabetic Position
Number of Results		181	177				
Ab	9	34	40		m	74	186
Ab	9	40	40		m	80	185
An	8	28	28		m	56	184
Ar	9	40	46	f		86	183
Ar	9	40	40	f		80	182
Ba	9	40	46	f		86	181
Ba	8	52	52	f		104	180
Ba	10	46	40	f		86	179
Be	11	40	40	f		80	178
Be	10	40	46		m	86	177
Bi	10	40	28		m	68	176
Bi	8	40	40		m	80	175
Bo	8	52	52		m	104	174
Br	10	40	40		m	80	173
Br	12	46	46	f		92	172

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Br	8	46	40		m	86	171
Bu	11	40	46		m	86	170
Bu	10	58	52		m	110	169
Bu	10	40	40	f		80	168
Bu	9	46	52		m	98	167
Ca	9	46	46	f		92	166
Ca	10	58	58	f		116	165
Ca	10	52	58		m	110	164
Ca	6.5	28	28		m	56	163
Ch	7.5	28	34		m	62	162
Ch	8	40	40	f		80	161
Cl	10	46	46	f		92	160
Cl	9	40	52		m	92	159
Cl	11	52	46	f		98	158
Co	10	40	28	f		68	157
Co	8	40	40		m	80	156
Co	6.5	28	28		m	56	155
Co	10	40	22	f		62	154
Co	9	52	52	f		104	153
Co	9	46	46	f		92	152
Co	10	40	34		m	74	151
Cr	9	46	40	f		86	150
Cr	10	40	40	f		80	149
Cu	10	34	28		m	62	148
Da	7.5	34	28		m	62	147
Da	8	40	46	f		86	146
Da	8.5	34	28		m	62	145
De	9	58	52	f		110	144
Do	8.5	34	28		m	62	143
Ed	10	40	40	f		80	142
Eg	9	46	40	f		86	141
El	9	46	34		m	80	140
Ev	9	46	34	f		80	139
Fa	10	46	52		m	98	138
Fr	8	58	52		m	110	137
Fa	9	52	40	f		92	136
Fe	10	46	40	f		86	135
Fi	7.5	34	28		m	62	134
Fl	10	46	52	f		98	133
Fo	8	34	40	f		74	132
Fo	8.5	28	28		m	56	131
Fo	12	40	40	f		80	130
Ga	11	52	46	f		98	129
Ge	9	46	52	f		98	128
Ge	9	46	52		m	98	127
Go	10	58	46		m	104	126
Go	12	46	28	f		74	125
Gr	8.5	40	34		m	74	124
Gr	10	40	34		m	74	123
Gr	9	40	34	f		74	122
Gu	10	52	52	f		104	121
Ha	10	46	40		m	86	120

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Ha	10	52	40	f			92	119
He	10	40	40			m	80	118
Hi	9	46	52			m	98	117
Ho	10	40	34			m	74	116
Hu	7.5	34	28			m	62	115
Hu	9	52	52			m	104	114
Iw	11	46	40	f			86	113
Ja	10	46	46	f			92	112
Ja	9	40	46	f			86	111
Ja	9	46	40			m	86	110
Ke	11	40	28			m	68	109
Ki	8	40	46			m	86	108
La	8	34	22	f			56	107
La	8	58	52	f			110	106
La	11	46	34	f			80	105
Le	12	52	46	f			98	104
Le	9	40	40	f			80	103
Le	9	40	46			m	86	102
Le	10	34	28	f			62	101
Li	8	28	22			m	50	100
Lo	9	34	28			m	62	99
Lo	10	46	34	f			80	98
Ma	9	52	58			m	110	97
Ma	10	40	34	f			74	96
Ma	9	40	34			m	74	95
Ma	12	58	52	f			110	94
McC	8	34	40			m	74	93
McC	9	40	46			m	86	92
McG	10	34	28			m	62	91
McM	9	34	40			m	74	90
McMi	9	46	46	f			92	89
Mi	10	46	52	f			98	88
Mi	11	40	40			m	80	87
Mi	10	34	28			m	62	86
Mi	8.5	28	22	f			50	85
Mi	8	34	28			m	62	84
Mo	10	46	40	f			86	83
Mo	10	46	46	f			92	82
Mo	9	52	58	f			110	81
Mo	9	46	52			m	98	80
Mo	9	34	22			m	56	79
Mo	9	40	46			m	86	78
Mo	10	52	52			m	104	77
Mo	9	52	52	f			104	76
Na	9	40	40			m	80	75
Na	10	40	34			m	74	74
Ne	9	46	52			m	98	73
Ne	10	40	40			m	80	72
Ng	11	46	46			m	92	71
Nu	8.5	34	40			m	74	70
O'D	10	40	40			m	80	69
O'D	8	28	46			m	74	68

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Ol	11	34	34			m	68	67
Or	9	46	40	f			86	66
Pa	9	40	52			m	92	65
Ph	10	40	40			m	80	64
Po	10	28	34			m	62	63
Po	11	46	46			m	92	62
Re	8	40	40			m	80	61
Re	9	40	40	f			80	60
Ri	11	52	46			m	98	59
Ro	9	40	46			m	86	58
Ro	9	40	46			m	86	57
Ro	9	52	40	f			92	56
Ro	10	52	40			m	92	55
Ro	9	58	52			m	110	54
Ru	7	34	46			m	80	53
Ru	11	46	40			m	86	52
Sa	10	46	46			m	92	51
Sa	7	40	34	f			74	50
Sc	10	46	46	f			92	49
Sh	12	46	40	f			86	48
Si	10	34	34	f			68	47
So	10	34	28	f			62	46
St	9	40	46			m	86	45
Sw	9	40	46			m	86	44
Sz	10	40	46			m	86	43
Te	10	40	40	f			80	42
Th	10	40	40			m	80	41
Ti	11	40	40	f			80	40
To	10	40	34	f			74	39
To	10	40	34	f			74	38
Tu	10	46	52	f			98	37
Va	10	40	34			m	74	36
Vi	9	40	52	f			92	35
Wa	9	40	46			m	86	34
Wa	10	40	40	f			80	33
Wa	9	46	40	f			86	32
Wa	6.5	22	28			m	50	31
Wa	9	40	40			m	80	30
Wa	10	46	46			m	92	29
We	9	40	40	f			80	28
We	10	34	46			m	80	27
We	9	58	52	f			110	26
Wh	10	46	40			m	86	25
Wh	9	46	52	f			98	24
Wi	11	52	46	f			98	23
Wi	10	40	40			m	80	22
Wi	10	28	28			m	56	21
Wo	8	52	46			m	98	20
Wo	11	52	40			m	92	19

Correlation

0.684648303

How to calculate the Correlation Coefficient

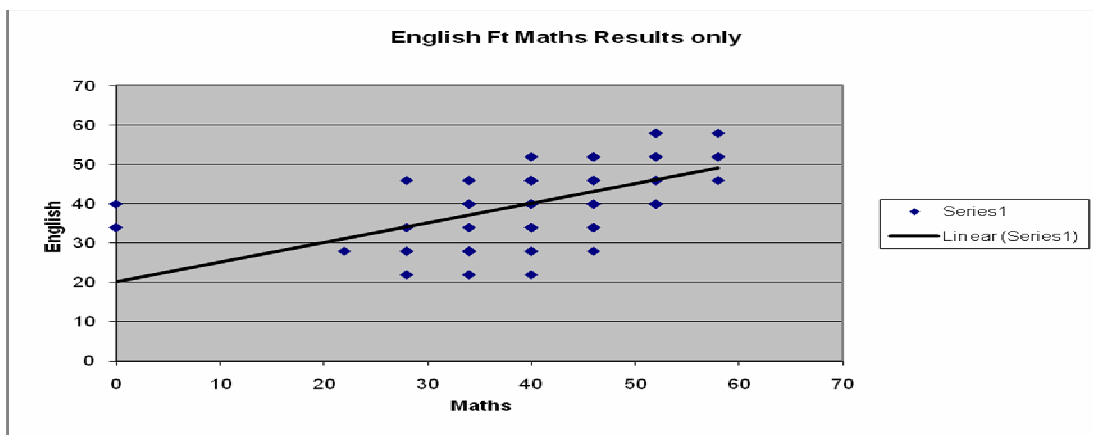
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Base on my knowledge I have been taught in maths a positive correlation is an association between two variables, if an increase in one variable results in an increase in the an approximately linear manner. To find the strength of the association between the correlation you have to use the correlation coefficient (r) that it's been range from 0 and 1 and that will be a positive correlation but if its from 0 to -1 then it becomes a negative correction. The correlation coefficient value of 0 suggests that there is no correlation while if the correlation coefficient value is 1 it suggests that there is a perfect positive correlation. For example the English ft maths result only graph shows a strong positive correlation.

The formula I used on Microsoft excel to calculate correlation between the English and Maths is
'=CORREL(C10:C177,D10:D177)', this shows that there is strong coefficient correlation between the subjects because it shows that a student doing well in his or her English class is also doing well in his or her Maths class.

Correlation	Total =	0.684648303
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This graph shows the total score for English against the total score for Mathematics for each student. This graph is showing a positive correlation and the line of best fit is correct and this time around it's clearer. The two points on the 0 axis shows that the students dint do the exams (did not turn up on the day of the exam) or probably had a grade 'U' on their GCSE examination



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The data below shows the total grade point score of each student both on their mathematics and Religious Studies also with the calculated correlation but without adding the students that had 0 on their grade points in total.

Result Broadsheet: Summer
Season 2010
Qualification: GCSE
Scope: National Curriculum
Year
Export Date : 10/06/2011

Name	Entries	Mathematics	Religious Studies	FEMALE GENDER	MALE GENDER	Total score	Alphabetic Position
Number of Results		177	169				
Ab	9	40	40		m	80	186
Ab	9	40	46		m	86	185
An	8	28	40		m	68	184
Ar	9	46	52	f		98	183
Ar	9	40	52	f		92	182
Ba	5.5	46	58		m	104	181
Ba	9	46	46	f		92	180
Ba	10	40	52	f		92	179
Be	11	40	46	f		86	178
Be	10	46	46		m	92	177
Bi	10	28	46		m	74	176
Bi	8	40	40		m	80	175
Br	10	40	40		m	80	174
Br	12	46	46	f		92	173
Br	8	40	46		m	86	172
Bu	11	46	46		m	92	171
Bu	10	40	46	f		86	170

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							0
Bu	9	52	52	f	m	104	16
Ca	9	46	52				9
Ca	10	58	58	f	m	116	16
Ca	10	58	58				7
Ca	6.5	28	22	m	50	50	16
Ch	7.5	34	16				4
Ch	8	40	40	f	80	80	16
Cl	10	46	52				3
Cl	9	52	46	f	98	98	16
Co	10	28	40				2
Co	8	40	46	f	m	86	16
Co	6.5	28	34				1
Co	10	22	40	f	62	62	15
Co	9	46	52				7
Co	10	34	40	f	98	98	15
Cr	9	40	52				6
Cr	10	40	40	f	m	74	15
Cu	10	28	40				5
Da	7.5	28	34	f	92	92	15
Da	8	46	46				4
Da	8.5	28	40	f	m	68	15
Do	8.5	28	28				3
Ed	10	40	46	f	86	86	15
Eg	9	40	52				2
El	9	34	34	f	92	92	15
Et	9	52	46				1
Ev	9	34	52	f	m	68	14
Fa	10	52	52				9
Fa	9	40	52	f	m	98	14
							4
				f	86	86	14
							3
				f	m	104	14
							2
				f	92	92	14
							1

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Fe	10	40	46	f		86	14
Fi	7.5	28	28		m	56	0
Fl	10	52	46	f		98	13
Fo	8	40	34	f		74	13
Fo	8.5	28	28		m	56	7
Fo	12	40	46	f		86	13
Ga	11	46	52	f		98	5
Ge	9	52	58	f		110	13
Ge	9	52	52		m	104	4
Go	10	46	58		m	104	13
Go	12	28	46	f		74	1
Gr	8.5	34	34		m	68	13
Gr	10	34	34		m	68	12
Gr	9	34	40	f		74	9
Gu	10	52	52	f		104	12
Ha	10	40	52		m	92	6
Ha	10	40	52	f		92	12
He	10	40	46		m	86	5
Hi	9	52	58		m	110	12
Ho	10	34	46		m	80	3
Hu	7.5	28	34		m	62	12
Hu	9	52	58		m	110	1
Iw	11	40	52	f		92	0
Ja	10	46	58	f		104	11
Ja	9	46	52	f		98	11
Ja	9	40	52		m	92	7
Jo	9	40	52		m	92	11
Jo	10	34	40		m	74	6
Ke	11	28	40		m	68	11
Ki	8	46	52		m	98	2

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							1
La	8	22	28	f	50		11
La	11	34	46	f	80		10
Le	12	46	52	f	98		9
Le	9	40	40	f	80		10
Le	9	46	40		m	86	8
Le	10	28	34	f	62		10
Li	8	22	28		m	50	5
Lo	9	28	40		m	68	10
Lo	10	34	46	f	80		4
Ma	9	58	58		m	116	10
Ma	10	34	40	f	74		1
Ma	9	34	46		m	80	10
Ma	12	52	58	f	110		0
McC	8	40	34		m	74	99
McC	9	46	52		m	98	98
McG	10	28	34		m	62	97
McM	9	40	46		m	86	96
McMi	9	46	46	f	92		95
Mi	10	52	46	f	98		94
Mi	11	40	52		m	92	93
Mi	10	28	16		m	44	92
Mi	8.5	22	34	f	56		91
Mi	8	28	40		m	68	90
Mo	10	40	52	f	92		89
Mo	10	46	46	f	92		88
Mo	9	58	52	f	110		87
Mo	9	52	46		m	98	86
Mo	9	22	22		m	44	85
Mo	9	46	46		m	92	84
Mo	10	52	52		m	104	83
Mo	9	52	52	f	104		82
Na	9	40	46		m	86	81
Na	10	34	46		m	80	80
Ne	9	52	52		m	104	79
Ne	10	40	46		m	86	78
Ne	9	46	52		m	98	77
Ng	11	46	46		m	92	76
Nu	8.5	40	28		m	68	75
O'D	10	40	40		m	80	74
O'D	8	46	40		m	86	73
Ol	11	34	40		m	74	72
Or	9	40	52	f	92		71
							70
							69

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Pa	9	52	52		m	104	68
Ph	10	40	40		m	80	67
Po	10	34	40		m	74	66
Po	11	46	46		m	92	65
Re	8	40	46		m	86	64
Re	9	40	34	f		74	63
Ri	11	46	52		m	98	62
Ro	9	46	46		m	92	61
Ro	9	46	40		m	86	60
Ro	9	40	52	f		92	59
Ro	9	52	58		m	110	58
Ru	11	40	52		m	92	57
Sa	10	46	52		m	98	56
Sa	7	34	46	f		80	55
Sc	10	46	52	f		98	54
Se	9	34	34		m	68	53
Sh	12	40	40	f		80	52
Si	10	34	40	f		74	51
So	10	28	28	f		56	50
St	9	46	52		m	98	49
Sw	9	46	46		m	92	48
Sz	10	46	52		m	98	47
Te	10	40	52	f		92	46
Th	10	40	46		m	86	45
Ti	11	40	46	f		86	44
To	10	34	52	f		86	43
To	10	34	40	f		74	42
Va	10	34	40		m	74	41
Vi	9	52	46	f		98	40
Wa	9	46	46		m	92	39
Wa	10	40	46	f		86	38
Wa	9	40	52	f		92	37
Wa	6.5	28	16		m	44	36
Wa	9	40	46		m	86	35
Wa	10	46	52		m	98	34
We	9	40	46	f		86	33
We	10	46	34		m	80	32
We	9	52	52	f		104	31
Wh	10	40	46		m	86	30
Wh	9	52	52	f		104	29
Wi	11	46	52	f		98	28
Wi	10	40	46		m	86	27
Wi	10	28	34		m	62	26
Wo	11	40	52		m	92	25
Wr	10	34	40		m	74	24

TOTAL
CORRELATION = 0.703238235

The formula I used on Microsoft excel to calculate correlation between the Mathematics and Religious Studies is

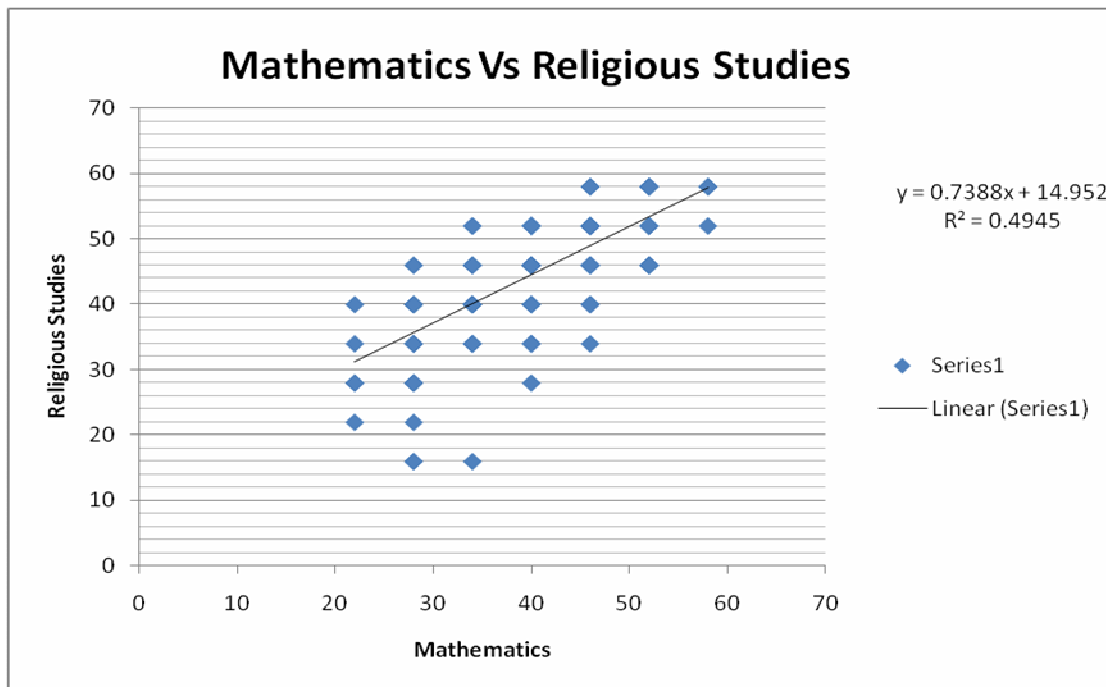
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'=CORREL(C10:C172, D10:D172)', this shows that there is strong coefficient correlation between the subjects because it shows that a student doing well Mathematics also performs very well is Religious Studies.

CORRELATION **TOTAL**
= **0.703238235**



The graph below shows the total score for Mathematics against the total score for Religious Studies for each student. This graph is showing a strong positive correlation coefficient and the line of best fit is very strong. This graph shows that the overall marks had in Maths were similar to their Religious Studies marks as well which very strange because there are two completely subjects and criteria's.



Mode is the most number that reoccur in a data more than other numbers. So Base on my data that I collected what I did was I find the mode (most occurring number) of the data which I used the Microsoft excel functions to find the mode easily. The formula function that I used on Microsoft excel to find the mode was '=MODE(C10:AF195)'. As you can see below the most occurring

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number in my data was 40 which converted to a GCSE grade is a grade 'C'. So this shows that from GCSE result in my secondary school 2010 most students had C's.

Mode 40

Mean is the average of the numbers. It is easy to calculate because all you have to do is add up all the numbers, then divide by how many numbers there are. In other words it is the sum divided by the count. Base on my data I used the Microsoft excel to calculate my mean for me because my data contains of so many numbers, so the formula function key I used on Microsoft excel to calculate my mean was '=AVERAGE(C10:AF195)' and as you can see below my mean average for my data base on the GCSE result 2010 for my secondary school was '42.58083'.

[illegible]

Median is the 'middle value' in the list. When the totals of the list are odd, the median is the middle entry in the list after sorting the list into increasing order. When the totals of the list are even, the median is equal to the sum of the two middle (after sorting the list into increasing order) numbers divided by two. To get the right median it is a must that you must arrange the numbers on the list in ascending order so as to get a right value, and the middle number is the median. To get the median on my data I used the Microsoft excel formula function '=MEDIAN(C10:AF195)' so as you can see below the median number on my data is '40'.

Median 40

Standard deviation is a measure of how widely values are dispersed from the average value (which is the mean). To calculate the standard deviation my data I used the Microsoft formula function which was '=STDEVA(C10:AF195)' which as you can see below my standard deviation for my data is 9.5003691.

Standard Deviation 9.5003691

Conclusion

Having analyzed my data base on the 2010 GCSE results from my secondary school, I have disprove my hypothesis because having looked at the graphs the mean, the mode, the median and the correlation from my data, it shows that it did not matter where a student was placed on the register alphabetically because my hypothesis where meant to be showing a negative correlation but instead it showed a positive correlation and some of the graphs did not show any correlation at all. So my hypothesis was wrong because student being at the bottom of the alphabetic register did much well as the students with their names being at the top of the alphabetical rooter. Even though I tried to prove the point that students might do very well in math's and be really bad in Religious studies did not also work because the graph turned up to be a positive correlation as well disproving me that in my secondary school the GCSE result 2010, the students where multi-covered in all the areas of the department in school leading them to do well in all their subjects so as to balance out and come out with good GCSE results in all their subjects.