Regression Worksheet   Name_____

The following data table compares various SAT scores and GPA's for 50 college students:

count	HighSchool GPA	Math SAT	Verbal SAT	Computer Science GPA	University GPA
1	3.45	643	589	3.76	3.52
2	2.78	558	512	2.87	2.91
3	2.52	583	503	2.54	2.4
4	3.67	685	602	3.83	3.47
5	3.24	592	538	3.29	3.47
6	2.1	562	486	2.64	2.37
7	2.82	573	548	2.86	2.4
8	2.36	559	536	2.03	2.24
9	2.42	552	583	2.81	3.02
10	3.51	617	591	3.41	3.32
11	3.48	684	649	3.61	3.59
12	2.14	568	592	2.48	2.54
13	2.59	604	582	3.21	3.19
14	3.46	619	624	3.52	3.71
15	3.51	642	619	3.41	3.58
16	3.68	683	642	3.52	3.4
17	3.91	703	684	3.84	3.73
18	3.72	712	652	3.64	3.49
19	2.15	564	501	2.14	2.25
20	2.48	557	549	2.21	2.37
21	3.09	591	584	3.17	3.29
22	2.71	599	562	3.01	3.19
23	2.46	607	619	3.17	3.28
24	3.32	619	558	3.01	3.37
25	3.61	700	721	3.72	3.61
26	3.82	718	732	3.78	3.81
27	2.64	580	538	2.51	2.4
28	2.19	562	507	2.1	2.21
29	3.34	683	648	3.21	3.58
30	3.48	717	724	3.68	3.51
31	3.56	701	714	3.48	3.62
32	3.81	691	684	3.71	3.6
33	3.92	714	706	3.81	3.65
34	4	689	673	3.84	3.76
35	2.52	554	507	2.09	2.27
36	2.71	564	543	2.17	2.35
37	3.15	668	604	2.98	3.17
38	3.22	691	662	3.28	3.47
39	2.29	573	591	2.74	3
40	2.03	568	517	2.19	2.74
41	3.14	607	624	3.28	3.37
42	3.52	651	683	3.68	3.54
43	2.91	604	583	3.17	3.28
44	2.83	560	542	3.17	3.39
45	2.65	604	617	3.31	3.28
46	2.41	574	548	3.07	3.19
47	2.54	564	500	2.38	2.52
48	2.66	607	528	2.94	3.08
49	3.21	619	573	2.84	3.01
50	3.34	647	608	3.17	3.42

1) Comparing Math SAT scores to University GPA and Verbal SAT score to University GPA which has a higher correlation coefficient? Show each value?

2) Find the regression line for each of the comparisons in #1. Give the equations below.

3) Find a student who has a math score of 700. Which of the two regression lines generated in #2 is a better predictor of his/her college GPA? Show the work that leads to your answer.

4) Is there a strong correlation between Math SAT and Computer Science GPA?