Math 207
Introduction to Statistics

1. For the following data, (a) write down the equation for the regression line, (c) sketch the regression line and (c) use the regression line to predict the y value if $x = 130$.

x: average ≈ 100, sd ≈ 15
y: average ≈ 110, sd ≈ 30, $r \approx 0.8$

2. For the following data, (a) write down the equation for the regression line, (c) sketch the regression line and (c) use the regression line to predict the y value if $x = 8$.

x: average ≈ 10, sd ≈ 2
y: average ≈ 12, sd ≈ 6, $r \approx -0.2$

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y: average ≈ 12, sd ≈ 6, $r \approx -0.2$

3. For the small data set below left, $r \approx 0.76$. Find r for the other data sets.

x	y
1	2
2	3
3	1
4	5
5	6

x	y
2	1
3	2
1	3
5	4
6	5

x	y
1	0
2	1
3	-1
4	3
5	4

x	y
1	4
2	6
3	2
4	10
5	12

4. For the following data, calculate the correlation coefficient.

x	7	8	10	11	11	13
y	8	7	11	11	13	10

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