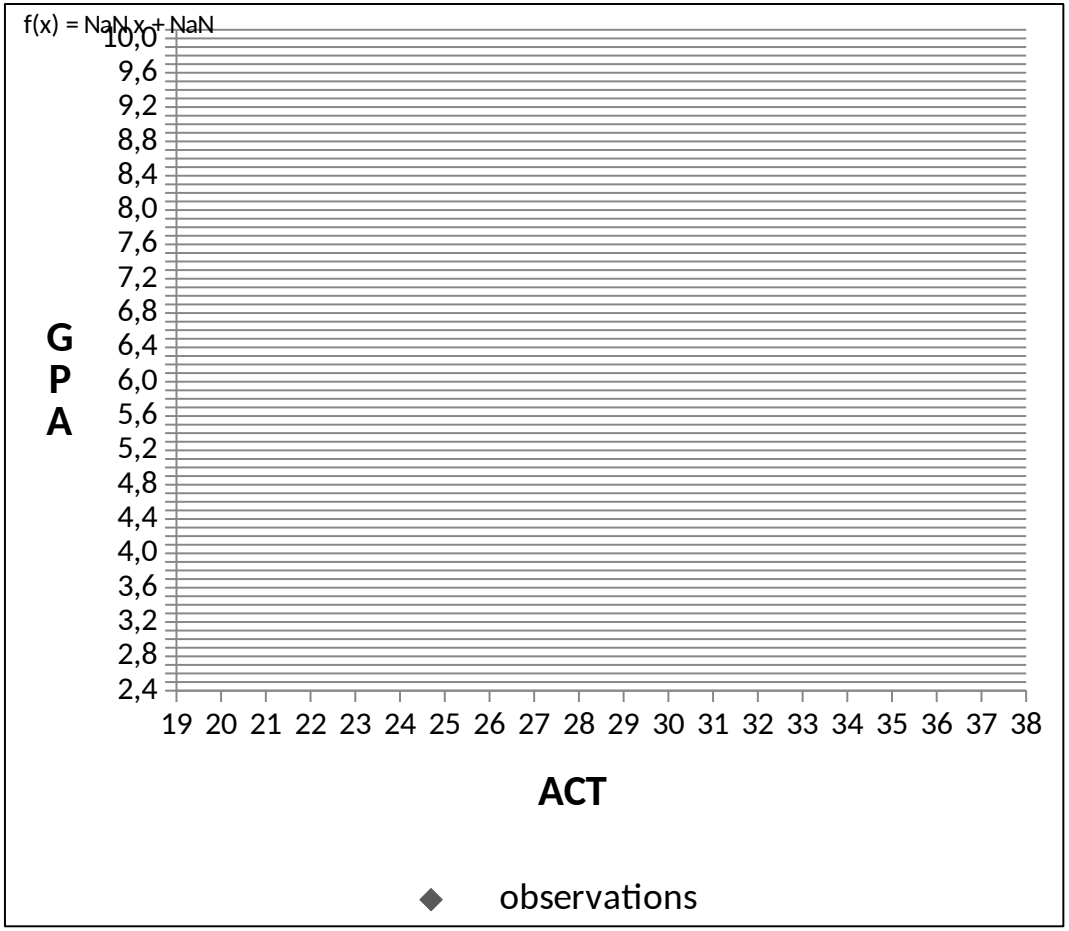
student	GPA (y)	ACT (x)
n	sum(y)	sum(x)
	avg(y)	avg(x)

y-avg(y)	x-avg(x)	(y-avg(y))*(x-avg(x))	(x-avg(x))^2
		sum	sum

estimated y	residual

	estimated
beta_0	
beta_1	


f(x) = NaN x + NaN
10,0
9,6
9,2
8,8
8,4
8,0
7,6
7,2
6,8
6,4
6,0
5,6
5,2
4,8
4,4
4,0
3,6
3,2
2,8
2,4
GPA
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
ACT
observations

student	GPA (y)	ACT (x)

vector y

matrix X	

X'								

X'X	

Hint for Windows: Expand to the size of the matrix & Press F2, the
Hint for Mac: Expand to the size of the matrix & press CONTROL+U

(X'X)^(-1)	

Hint for Windows: Expand to the size of the matrix & Press F2, the
Hint for Mac: Expand to the size of the matrix & press CONTROL+U

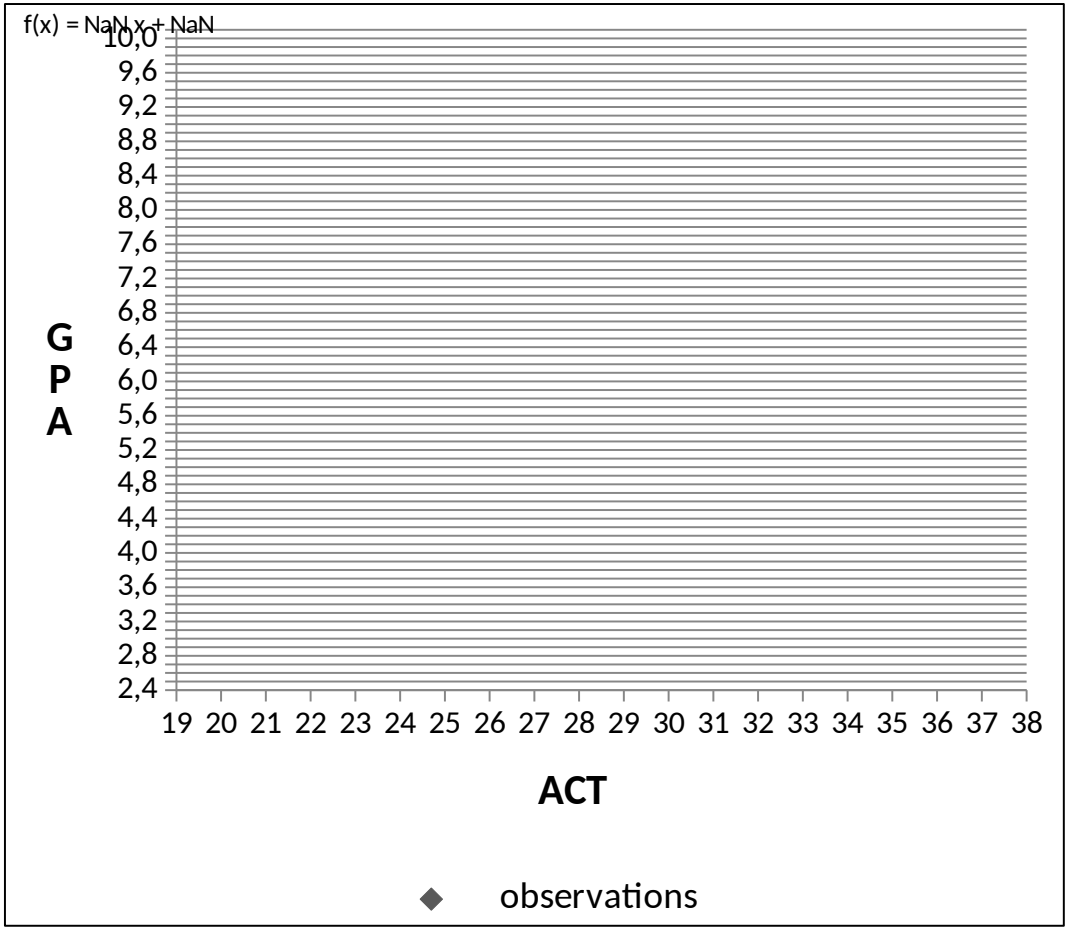
X'y

	estim.
beta_0	
beta_1	

n Ctrl+Shift+Enter (use "MMULT")
J, and then press ⌘+RETURN

n Ctrl+Shift+Enter (use "MINVERSE")
J, and then press ⌘+RETURN

estimated y	residual


f(x) = NaN x + NaN
10,0
9,6
9,2
8,8
8,4
8,0
7,6
7,2
6,8
6,4
6,0
5,6
5,2
4,8
4,4
4,0
3,6
3,2
2,8
2,4
GPA
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
ACT
observations

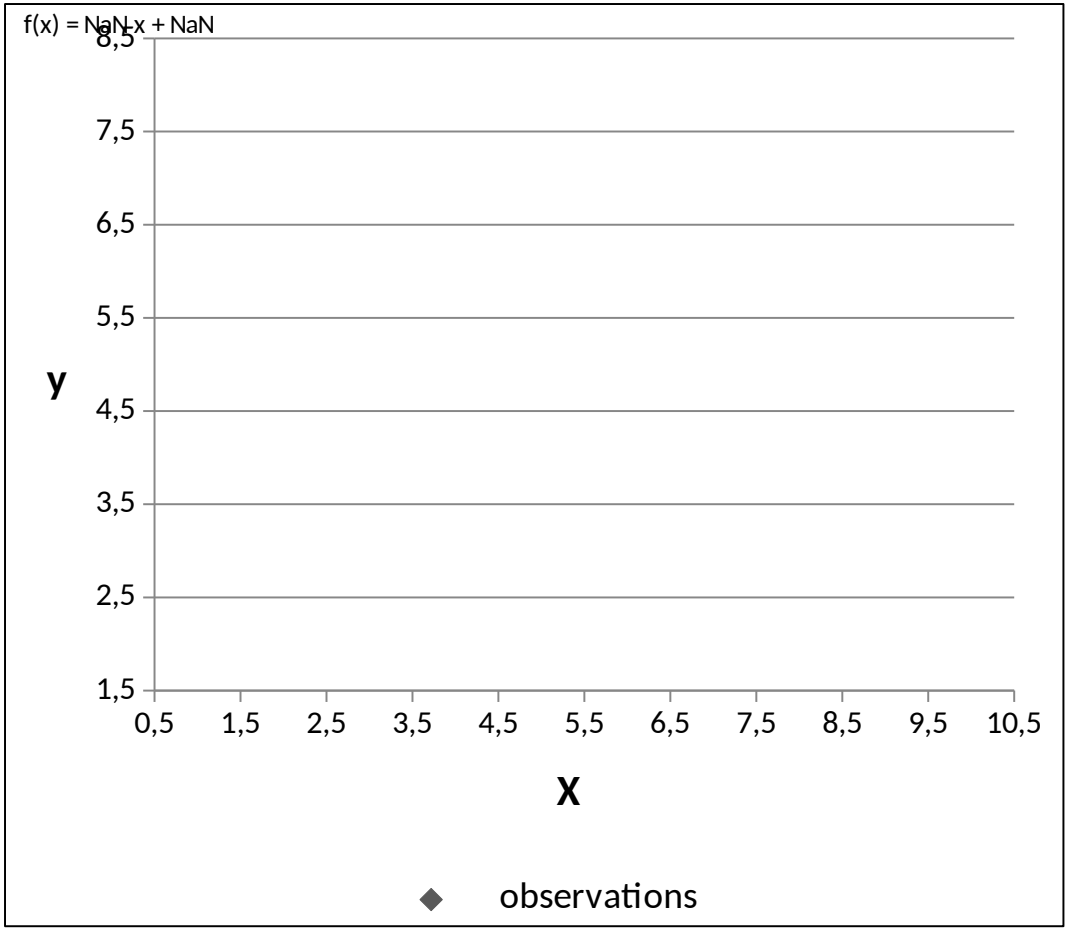
y	x
sum(y)	sum(x)
0	0
avg(y)	avg(x)
0,00	0,00

y-avg(y)	x-avg(x)	(y-avg(y))*(x-avg(x))	(x-avg(x))^2
		sum	sum
		0,00	0,00

	estimated	true
beta_0		0
beta_1		1,5

estimated y	true model y

residual	disturbance


f(x) = NaN x + NaN
8,5
7,5
6,5
5,5
4,5
3,5
2,5
1,5
y
0,5
1,5
2,5
3,5
4,5
5,5
6,5
7,5
8,5
9,5
10,5
X
observations

y	x
2	1
6	4
3	2
8	5
5	3
4	4

vector y

matrix X	

X'					

X'X	

(X'X)^(-1)	

X'y

	estim.	true
beta_0		0
beta_1		1,5

estimated y	true model y

residual	disturbance