Ross, Sec 3.2, #3

x = Avg amt of precip	y= Avg # of days
35.74	134
31.5	83
11.43	95
15.31	88
19.59	100
44.76	105
47.29	127
12.08	36
57.55	129
59.74	114
36.3	154
29.13	81
28.61	85

(a) sample mean = **33.002**

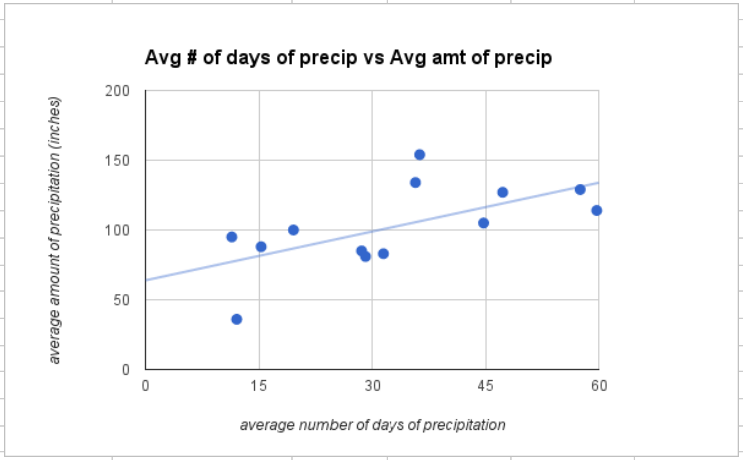
(b) sample mean = **102.385**

(c) standard deviations:

16.101 **30.179**

(d) We would expect the variables to be positively correlated, since a greater the number of days with precipitation should mean a larger amount of precipitation.

(e) **correlation coefficient** **0.622**



Sec 3.3, #6-7

#7: sample median = **31.5**

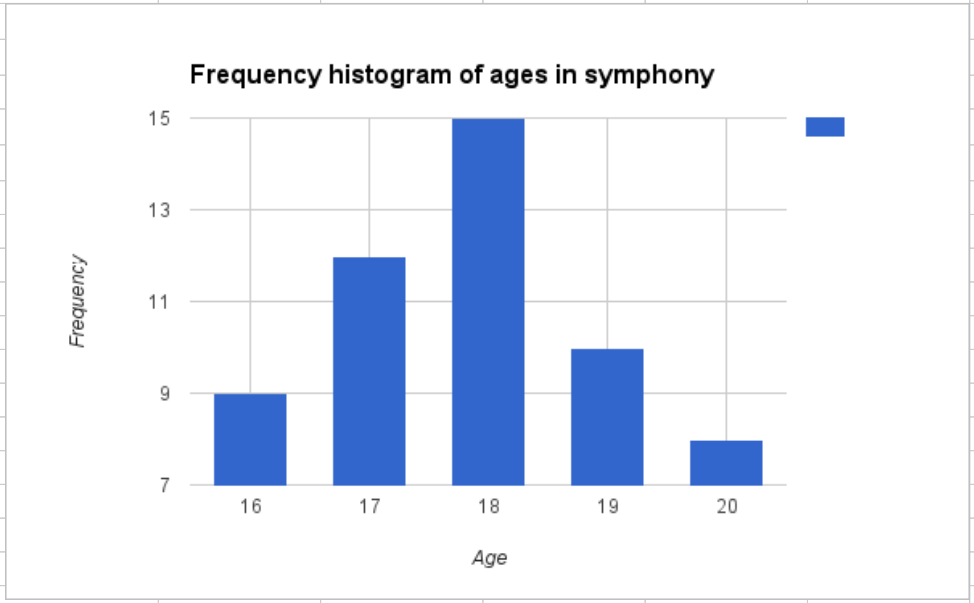
#6: sample median = **100.0**

Ross, Sec 3.2, #4

Given:	(x1+x2+x3+x4)/4 = 14
and so	(x1+x2+x3+x4) = 4*14 = 56
(a)	Suppose x5 = 24
Then	(x1+x2+x3+x4) + x5 = 56 + 24 = 90
and so the mean of (x1,x2,x3,x4,x5) is 90/5	16
(b)	Now the mean of (x1,x2,x3,x4,x5) is 24, i.e.
	(x1+x2+x3+x4+x5)/5 = 24
	x1+x2+x3+x4+x5 = 24*5 = 12
	To solve for x5, note that we know (x1+x2+x3+x4) = 56
	Hence, x5 = 120 - 56 = 64

Ross, Sec 3.2, #14

Age value	Frequency		Value*Frequency
16	9		144
17	12		204
18	15		270
19	10		190
20	8		160
count:	54	**sum**	968
		sample mean:	**17.926**



Ross, Sec 3.2, #17			**Ross, Sec 3.2, #18**				
Plant 1 sum of salaries = 30*($33,600)	$1,008,000		Sample 1:			Sample 2:	
Plant 2 sum of salaries = 20*($42,400)	$848,000		sample size =	n1		sample size =	n2
			sample mean =	x-bar1		sample mean =	x-bar2
Total sum of all 50 salaries =	$1,856,000						
Sample mean of all 50 salaries =	**$37,120**		Hence:			Hence:	
			Sum of sample 1 =	n1*(x-bar1)		Sum of sample 2 =	n2*(x-bar2)
			and so the sum of all observations, i.e., sum of sample 1 and sample 2, is				
			n1*(x-bar1) + n2*(x-bar2)				
			and the sample mean of the combined sample is				
			[n1*(x-bar1) + n2*(x-bar2)]/(n1+n2)				

Ross, Sec 3.5, #2

A	B
66	2
68	5
71	9
72	10
72	10
75	16

(a)

Sample B appears to have the larger sample variance, since it's values are more spread out

(b)

Sample variance of A:

10.27

(b)

Sample variance of B:

23.07

Ross, Sec 3.5, #3

Year	US Open	Masters
1981	273	280
1982	282	284
1983	280	280
1984	276	277
1985	279	282
1986	279	279
1987	277	285
1988	278	281
1989	278	283
1990	280	278

	(a)	(b)
	Sample var of US Open:	Sample var of Masters:
	6.18	**6.77**

So the variance of the US Open winning scores is actually lower than that of Masters winning scores.