

# ECE 341 - Homework #10

Testing with Normal Distributions. Due Thursday, June 4th

Please make the subject "ECE 341 HW#10" if submitting homework electronically to Jacob\_Glower@yahoo.com (or on blackboard)

The low for the month has been measured at Hector Airport since 1942. The mean and standard deviations are:

Month	May	June	July	Aug	Sept	Oct
Mean	27.4013F	40.2179F	46.2949F	43.2321F	30.5526F	19.3462F
st dev	4.4236F	3.9924F	3.9481F	4.1435F	4.8050F	5.1265F

[http://www.bisonacademy.com/ECE111/Code/Fargo\\_Weather\\_Monthly\\_Low.txt](http://www.bisonacademy.com/ECE111/Code/Fargo_Weather_Monthly_Low.txt)

The rainfall in Fargo each month (in inches) is

Month	May	June	July	Aug	Sept	Oct
Mean	2.6549	3.5025	2.9668	2.6529	2.1344	1.694
st dev	1.6536	2.1054	1.9505	1.7339	1.4913	1.4619

- 1) What is the 90% confidence interval for the low in June?
- 2) What is the probability that it will get colder than 40F in July?
- 3) What is the probability that the low in June will be less than the low in July?
- 4) What is the probability that we will get more rain in June than July?
- 5) What is the probability that we will get more rain in June than any other month?