

Lab Data

# Consider the Data from Class

0 µg/L	20 µg/L	40 µg/L
60	58	40
90	74	58
74	50	25
82	65	30
	68	42

1. Conduct a T-test comparing the 0ug/L to the 40 ug/L group  $\alpha = 0.05$
2. Assuming constant variance and the identical mean and pooled variance what is the power for this test?
3. What is the power for  $\alpha = 0.01$
4. Now assume non-constant variance (Satterthwaite approximation), what is the power for  $\alpha = 0.05$  and  $\alpha = 0.01$ .
5. Finally, is it reasonable to analyze 0ug/L vs. 20 ug/L and 0ug/L vs. 40 ug/L separately?