

In-Class Assignment L6-2: Monofilament

- A study is performed to determine if there is a difference in the strength of a monofilament fiber (y) produced by three different machines. The data from this experiment are shown below. The strength of the fiber is also affected by its thickness (x); consequently, a thicker fiber will generally be stronger than a thinner one.
- ◆ Determine if the strength of fiber is affected by the machines without considering thickness.
 - ◆ Determine if the strength of fiber is affected by the machines by considering thickness as a covariate.

Breaking Strength Data (y = Strength in Pounds and x = Diameter in 10^{-3} in.)

Machine 1		Machine 2		Machine 3	
y	x	y	x	y	x
36	20	40	22	35	21
41	25	48	28	37	23
39	24	39	22	42	26
42	25	45	30	34	21
49	32	44	28	32	15
207	126	216	130	180	106

Load data from 'Monofilament' sheet
in lect06-ancova.xlsx