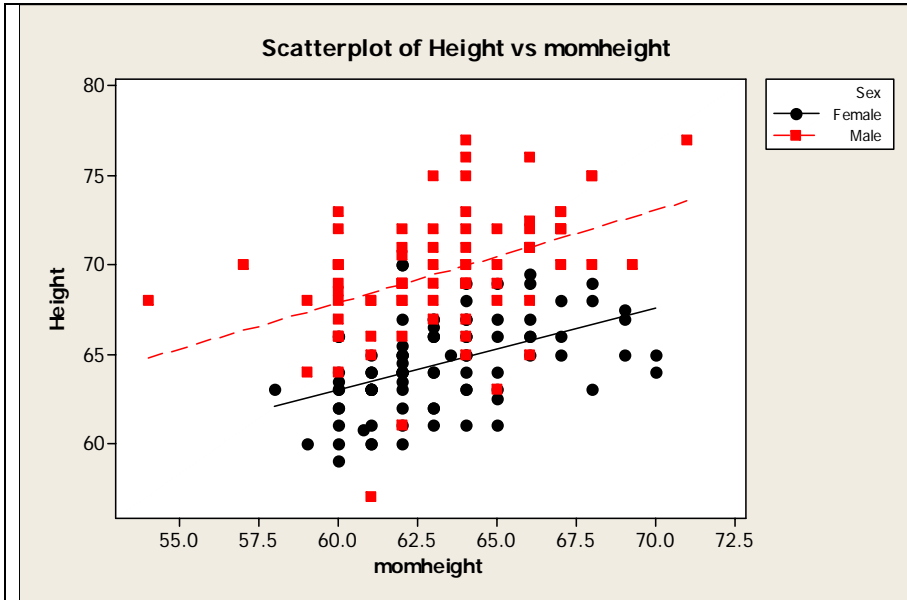


STATISTICS 108
Indicator Variable Example, Nov 14, 2007



DATA:

n = 169 UCD Statistics 13 students

Y = Student's height

X₁ = Mother's height (called momheight)

Regression below, left:

X₂ = 1 if Male, 0 if Female (called Sex_Male)

Regression below, right:

X₂ = 1 if Male, - 1 if Female (called Male+1Female-1)

The regression equation is
 Height = 33.7 + 0.487 momheight + 5.07 Sex_Male

Predictor	Coef	SE Coef	T	P
Constant	33.715	4.787	7.04	0.000
momheight	0.48658	0.07566	6.43	0.000
Sex_Male	5.0733	0.4201	12.08	0.000

S = 2.71659 R-Sq = 53.4% R-Sq(adj) = 52.8%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	2	1402.84	701.42	95.05	0.000
Residual Error	166	1225.06	7.38		
Total	168	2627.90			

The regression equation is
 Height = 36.3 + 0.487 momheight + 2.54 Male+1Female-1

Predictor	Coef	SE Coef	T	P
Constant	36.251	4.787	7.57	0.000
momheight	0.48658	0.07566	6.43	0.000
Male+1Female-1	2.5367	0.2101	12.08	0.000

S = 2.71659 R-Sq = 53.4% R-Sq(adj) = 52.8%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	2	1402.84	701.42	95.05	0.000
Residual Error	166	1225.06	7.38		
Total	168	2627.90			