

Regression Analysis: Sales versus Prose, Pearn, Disincome

The regression equation is

$$\text{Sales} = 13355 - 3628 \text{ Prose} + 2634 \text{ Pearn} - 19.3 \text{ Disincome}$$

Predictor	Coef	SE Coef	T	P
Constant	13355	6485	2.06	0.062
Prose	-3628.2	635.6	-5.71	0.000
Pearn	2634	1013	2.60	0.023
Disincome	-19.25	30.69	-0.63	0.542

$t_{calc} = \frac{\hat{\beta}}{s_{\hat{\beta}}}$

$S = 1076 \sqrt{\hat{\sigma}^2}$ R-Sq = 77.8% R-Sq(adj) = 72.2%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	3	48695532	16231844	14.01	0.000
Residual Error	12	13900824	1158402		
Total	15	62596356			

ESS (Error Sum of Squares) points to SS Regression.
 RSS (Residual Sum of Squares) points to SS Residual Error.
 TSS (Total Sum of Squares) points to SS Total.
 $\hat{\sigma}^2$ is indicated next to the MS Residual Error.

Predicted Values for New Observations

New Obs	\hat{Y}_0	Fit	SE Fit	$S_{\hat{Y}_0}$	CI for $E[Y X_0]$	CI for $Y X_0$
1		2892	891		95.0% CI (951, 4834)	95.0% PI (-152, 5937)

Values of Predictors for New Observations

New Obs	Prose	Pearn	Disincome
1	4.00	3.00	200

Why so wide??