SIMPLE REGRESSION MODEL

YEAR	X (UNITS)	Y (COST)	Y^2	XY	X^2
2000	10	$65	4225	650	100
2001	12	75	5625	900	144
2002	11	82	6724	902	121
2003	15	64	4096	960	225
2004	17	80	6400	1360	289
2005	20	75	5625	1500	400
TOTAL	85	441	32,695	6272	1279

$(65)^2$

$10*(65)$

$(10)^2$

SLOPE	B_1	0.3274	
INTERCEPT	B_0	68.8619	

$SSE = \Sigma y^2 - B_0 \Sigma y - B_1 \Sigma xy$

$SSR = B_0 \Sigma y + B_1 \Sigma xy - \frac{(\Sigma y)^2}{n}$

$SST = SSE + SSR$

$R^2 = SSR / SST$

SSE	273.478842	$= 32695 - 68.8(441) - .32(627$
SSR	8.02115813	$= 68.8(441) + .32(6272) - \frac{(4}{6}$
SST	281.5	$= 273.47 + 8.02$
R^2	0.02849435	$= (8.02)/(281.5)$
S_{XY}	8.269	

$\Sigma x = 85$

$\Sigma y = 441$

$\Sigma xy = 6272$

$\Sigma x^2 = 1279$

$\Sigma y^2 = 32,695$

$n = 6$

$\hat{y} = B_0 + B_1 (x_i)$

$B_1 = \text{slope} = \frac{\Sigma xy - \frac{\Sigma x \cdot \Sigma y}{n}}{\Sigma x^2 - \frac{(\Sigma x)^2}{n}} = \frac{6272 - \frac{(85)(441)}{6}}{1279 - \frac{(85)^2}{6}}$

$= .3274$

$B_0 = \text{INTERCEPT} = \frac{\Sigma y}{n} - B_1 \left(\frac{\Sigma x}{n}\right) = \frac{441}{6} - (.3274)\left(\frac{85}{6}\right)$

$= 68.8619$

S_{yx} = STANDARD ERROR OF ESTIMATE

$= \sqrt{\frac{\Sigma (y - \hat{y})^2}{n-2}} = \sqrt{\frac{273.48}{6-2}} = \sqrt{68.25} = 8.269$

SST = SUM OF SQUARES FOR TOTAL

SSE = " " " " ERROR

SSR = " " " " REGRESSION

$SST = SSE + SSR$