

# Regression

## Model Statistics

	Unstand	SE	Standard	t	p
Intercept	5.000				
Time 1	0.500	0.612	0.500	0.816	0.500

## Model Summary

	R	R2	Adj R2	F	p
Model	0.500	0.250	-0.125	0.667	0.500

“R” is a function of the covariance and the standard deviations of both variables:

$$R = \frac{COV}{(SD_X)(SD_Y)} = \frac{3.000}{(2.45)(2.45)} = 0.500$$

$$R^2 = 0.500^2 = 0.250$$

The Unstandardized Regression Coefficients (“Unstand”) are also a function of the Covariance and the descriptive statistics:

$$B_1 = \frac{COV}{(SD_X)^2} = \frac{3.000}{(2.449)^2} = 0.500$$

$$B_0 = M_Y - (B_1)(M_X) = 6.000 - (0.500)(2.000) = 5.000$$

The Standardized Regression Coefficient (“Standard”) for the predictor can be similarly determined:

$$\beta_1 = B_1 \left( \frac{SD_X}{SD_Y} \right) = 0.500 \left( \frac{2.449}{2.449} \right) = 0.500$$