Regression analysis is a form of inferential statistics. The p-values help determine whether the relationships that you observe in your sample) also exist in the larger population. The p-value for each independent variable tests the null hypothesis that the variable has no correlation with the dependent variable. If there is no correlation, there is no association between the changes in the independent variable and the shifts in the dependent variable. In other words, there is insufficient evidence to conclude that there is effect at the population level.

s effect at the population level. X null hypothesis: zero correlation

If the p-value for a variable is less than your <u>significance level</u> your sample data provide enough evidence to reject the null hypothesis for the entire population. Your data favor the hypothesis that there *is* a non-zero correlation. Changes in the independent variable *are* associated with changes in the <u>response</u> at the population level. This variable is statistically significant and probably a worthwhile addition to your regression model.

On the other hand, a p-value that is greater than the significance level indicates that there is insufficient evidence in your sample to conclude that a non-zero correlation" exists.

- 사라 과제가 이이 러닝 '리라고 선계 및 기에는 비란 근거가 불충돌 함"

The sign of a regression coefficient tells you whether there is a positive or negative correlation between each independent variable the dependent variable. A positive coefficient indicates that as the value of the independent variable increases, the mean of the dependent variable also tends to increase. A negative coefficient suggests that as the independent variable increases, the dependent variable tends to decrease.

· 께식의 역하 '해당 웨변수가 경실 변수가 경의 관계인지 또는 용의 관계인지를 나라낸다.

' 해당 계약 '되어는 삼간제는'가 아닌, '가술시'이라.

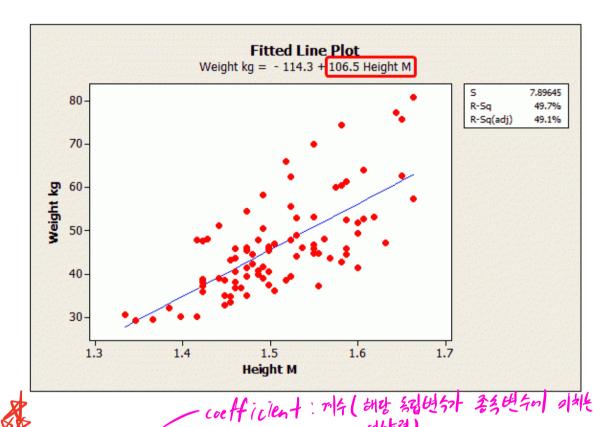
The regression output example below shows that the South and North <u>predictor</u> <u>variables</u> are statistically significant because their p-values equal 0.000. On the other hand, East is not statistically significant because its p-value (0.092) is greater than the usual significance level of 0.05.

				-value	" cofficient"	- 1 2	dkua
Coefficients			Coefficient 3 T-value & Note				からむし ク
Term	Coef	SE Coef	T	P	3227		
Constant	389.166	66.0937	5.8881	0.000	401 T- 1.3	ELILA	
East	2.125	1.2145	1.7495	0.092	해당 T-value É	Earl	
South	5.318	0.9629	5.5232	0.000		1 7	ادلالا
North	-24.132	1.8685	-12.9153	0.000	7 coefficient =	p-value =	वशक्त.

It is standard practice to use the <u>coefficient</u> p-values to decide whether to include variables in the final model. For the results above, we would consider removing East.

Keeping variables that are not statistically significant can reduce the model's precision.

Coefficients								
			T	_				
Constant	-114.326	17.4425	-6.55444	0.000				
Height M	106.505	11.5500	9.22117	0.000				



The height coefficient in the regression equation is 106.5. This coefficient represents the mean increase of weight in kilograms for every additional one meter in height. If your height increases by 1 meter, the average weight increases by 106.5 kilograms.

The regression line on the graph visually displays the same information. If you move to the right along the x-axis by one meter, the line increases by 106.5 kilograms. Keep in mind that it is only safe to interpret regression results within the observation space of your data. In this case, the height and weight data were collected from middle-school girls and range from 1.3 m to 1.7 m. Consequently, we can't shift along the line by a full meter for these data.