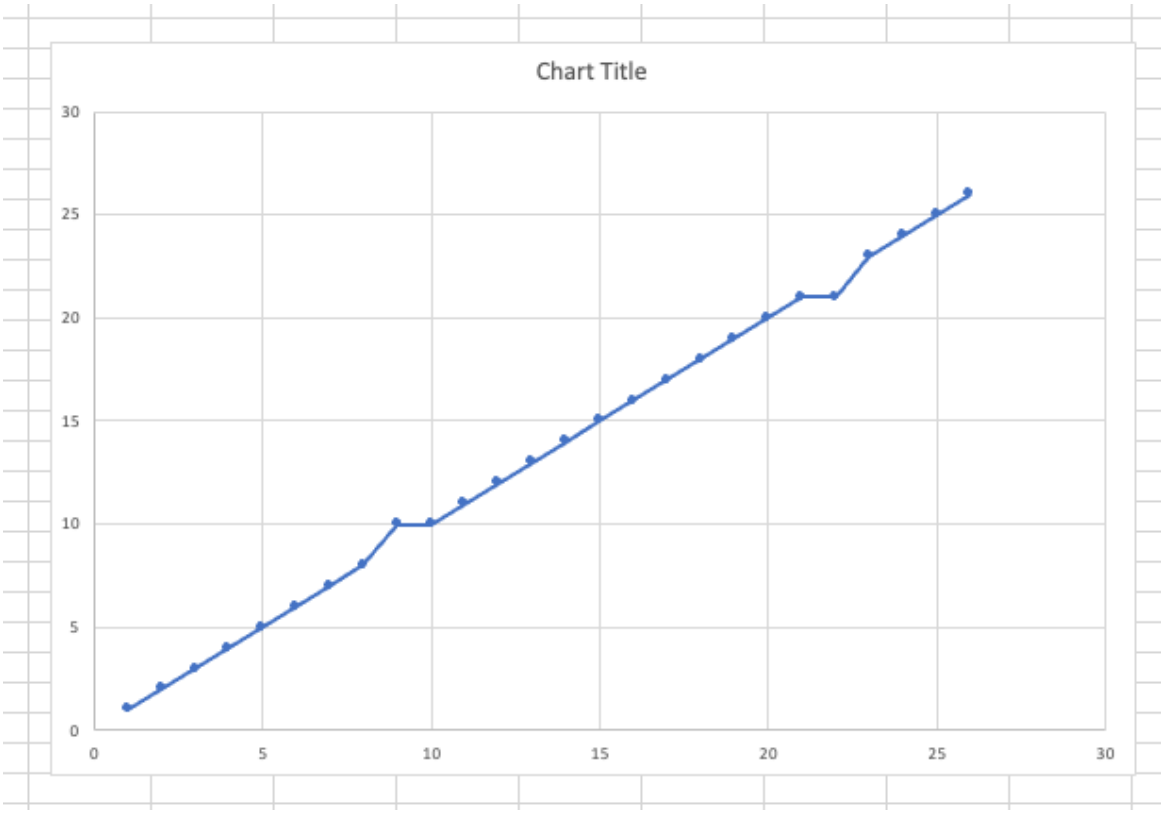
Basic Stats Definitions for a Regression Analysis:

The Null Hypothesis = The hypothesis that the two measurements, i.e. physical activity and happiness, are NOT correlated.

R = The *correlation coefficient* is measured on a scale that varies from + 1 through 0 to – 1. Complete correlation between two variables is expressed by either + 1 or -1. When one variable increases as the other increases the correlation is positive; when one decreases as the other increases it is negative. Complete absence of correlation is represented by 0.

Beta (β) = The parameter β (the *regression coefficient*) signifies the amount by which change in x must be multiplied to give the corresponding average change in y, or the amount y changes for a unit increase in x. In this way it represents the degree to which the line slopes upwards or downwards.

P-value = In statistics, the p-value is the probability of obtaining results at least as extreme as the observed results of a statistical hypothesis test, assuming that the null hypothesis is correct. An easy way to think about a p-value is that it is the probability that the null hypothesis is correct (there is no correlation between the parameters being measured). For example, a p-value of 0.05 means there is a 95% chance that a correlation is true, and only a 5% chance the null hypothesis (no correlation) is true. A p-value < 0.05 therefore means a correlation is >95% of being true.



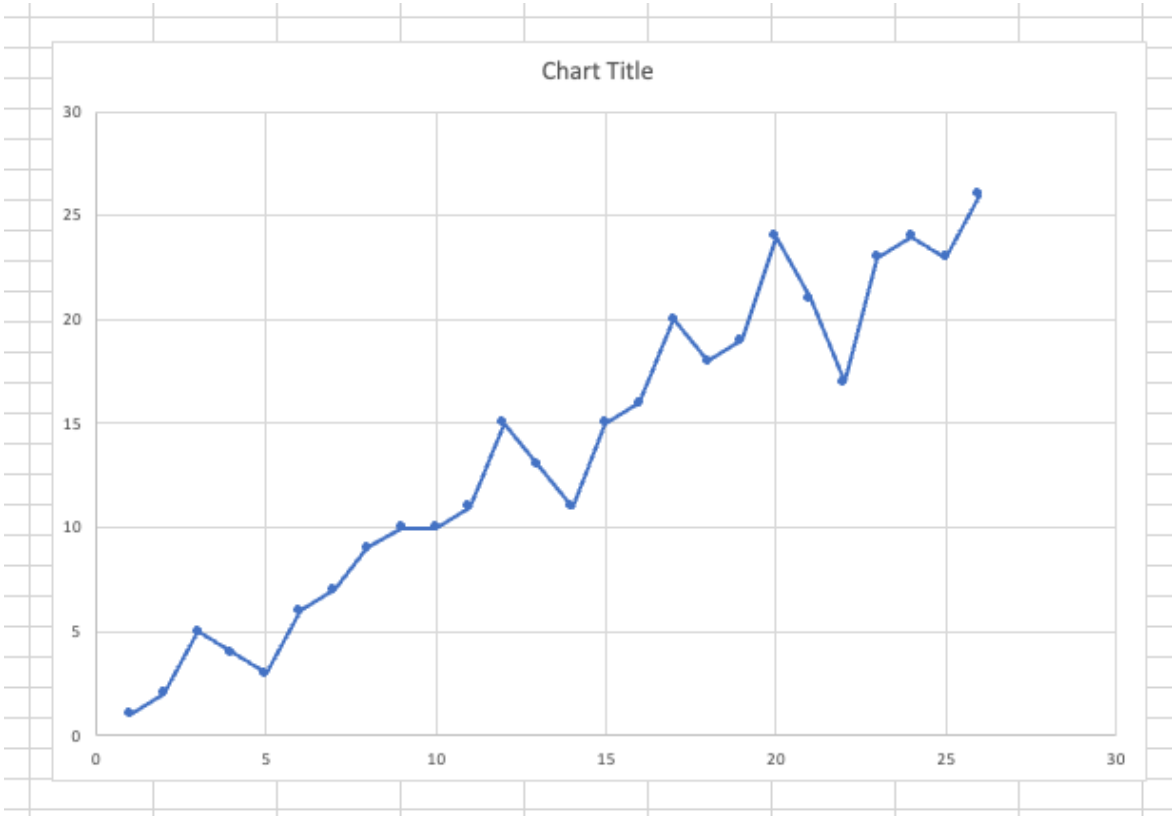
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.99934478
R Square	0.99868999
Adjusted R S	0.99863541
Standard Err	0.28253942
Observations	26

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1460.58412	1460.58412	18296.5189	4.1196E-36
Residual	24	1.9158846	0.07982853		
Total	25	1462.5			

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.1032325	0.1148223	-0.8990634	0.37755114	-0.3402141	0.13374905	-0.3402141	0.13374905
X Variable 1	1.00764685	0.00744945	135.264625	4.1196E-36	0.99227195	1.02302176	0.99227195	1.02302176



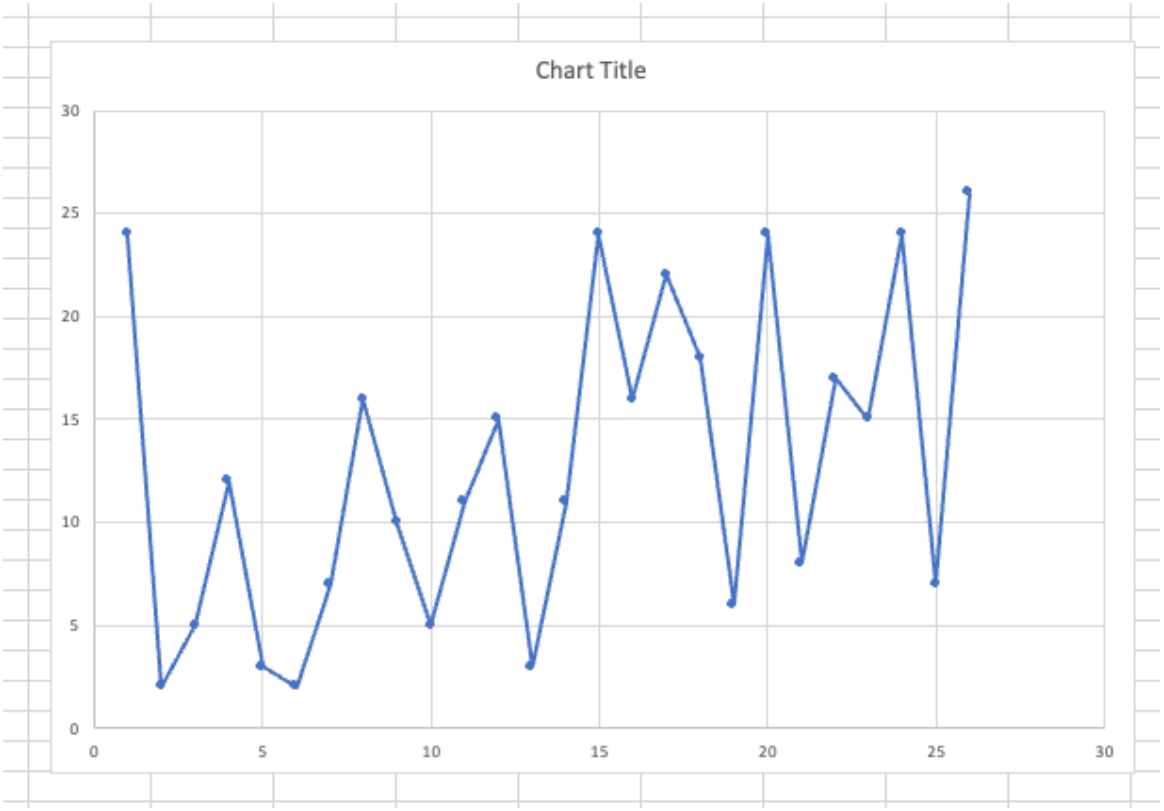
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.971878
R Square	0.94454685
Adjusted R S	0.94223631
Standard Err	1.83825354
Observations	26

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1381.39977	1381.39977	408.797807	1.3991E-16
Residual	24	81.100226	3.37917608		
Total	25	1462.5			

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.2314054	0.74875564	0.30905329	0.75994802	-1.3139503	1.77676109	-1.3139503	1.77676109
X Variable 1	0.97729025	0.04833584	20.2187489	1.3991E-16	0.87752998	1.07705053	0.87752998	1.07705053



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.43762955
R Square	0.19151962
Adjusted R S	0.15783294
Standard Err	7.01902936
Observations	26

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	280.097443	280.097443	5.68532145	0.02536075
Residual	24	1182.40256	49.2667732		
Total	25	1462.5			

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	8.02722828	2.67638641	2.99927853	0.00621638	2.50343823	13.5510183	2.50343823	13.5510183
X Variable 1	0.4273035	0.17920864	2.38439121	0.02536075	0.05743505	0.79717194	0.05743505	0.79717194