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Simple Regression

1. Determine the statistical relationship between the average answer time (seconds) and the average time per call (minutes).

Regression Equation

Time per call (average) (mins) = 7.199 - 0.03855 Answer Time (Average) (secs)

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	7.199	0.108	66.52	0.000	
Answer Time (Average) (secs)	-0.03855	0.00340	-11.34	0.000	1.00

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
0.349265	62.24%	61.76%	60.00%

Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	1	15.683	15.6831	128.56	0.000
Answer Time (Average) (secs)	1	15.683	15.6831	128.56	0.000
Error	78	9.515	0.1220		
Lack-of-Fit	33	3.634	0.1101	0.84	0.693
Pure Error	45	5.881	0.1307		
Total	79	25.198			

Fits and Diagnostics for Unusual Observations

Obs	Time per call (average) (mins)	Fit	Resid	Std Resid	
46	6.9000	6.1201	0.7799	2.25	R
63	6.5000	5.2720	1.2280	3.61	R
77	5.4000	6.1201	-0.7201	-2.07	R

- *R Large residual*

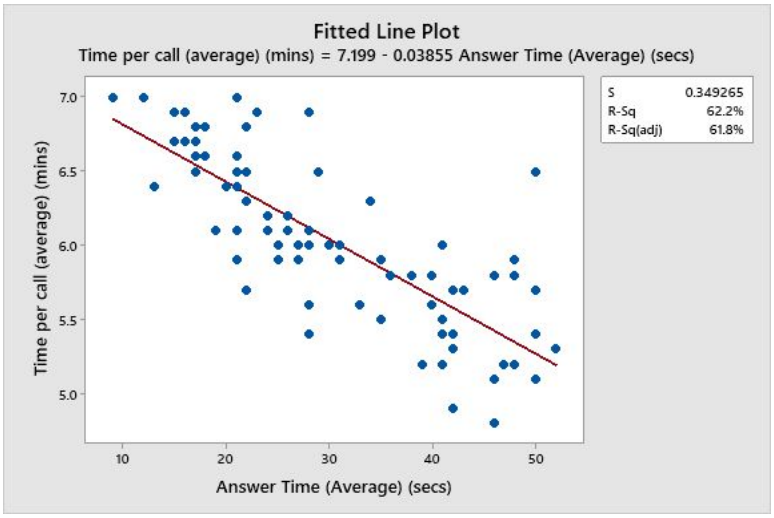
The regression equation is
Time per call (average) (mins) = 7.199 - 0.03855 Answer Time (Average) (secs)

Model Summary

S	R-sq	R-sq(adj)
0.349265	62.24%	61.76%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	15.6831	15.6831	128.56	0.000
Error	78	9.5149	0.1220		
Total	79	25.1980			

- 

2. Provide a brief summary of your analysis. (Assume you are a project manager providing this summary to your immediate manager - as in our other out-of-class assignments).
   - With a p-value of 0.000 which is less than .05, we can conclude that the answer time affects the time per call. An R^2 value of 62.2% is good because it means that the line is a relatively accurate representation of the data where 62.2% of the variation in time per call is explained by variation in answer time.
   - The data seems a little backwards to me. I feel like as answer time increases, so should call time because if people are on the phone for longer, that means they can't answer phones as quickly.