Stanly Smith is in the market for a used car so that he can get to Cascade College to take advanced financial accounting. Based on eye appeal only, he has narrowed his choice to the Smogger, an import from Lapland. The *Community Times* want ads section lists the following used Smoggers for sale:

|  |  |  |
| --- | --- | --- |
| Smogger | Age | Price |
|  | (Years) | ($1000) |
| 1 | 1 | 8.45 |
| 2 | 2 | 7.8 |
| 3 | 2 | 6.0 |
| 4 | 3 | 6.1 |
| 5 | 3 | 5.2 |
| 6 | 4 | 3.9 |
| 7 | 6 | 3.5 |
| 8 | 7 | 1.45 |

Now inspect the following Excel output:

SUMMARY OUTPUT



ANOVA





a. Explain clearly what should be the independent variable and what should be the dependent variable.

b. What is the forecasting equation suggested by the Excel output?

c. Using the confidence interval method can you reject the Null hypothesis at the 5% level of significance?

d. Using the t statistic method can you reject the Null hypothesis at the 5% level of significance?

e. What is the estimated price of a 5 year old Smogger?

f. What is the correlation coefficient between age and price?

g. What is the maximum gain in forecasting information from an expansion of the model to include additional independent variable(s) and/or by a change in the form of the independent variable?

h. What percent of the estimated price can be explained by the age of the used car?

i. What is the correlation coefficient between age and price?