The dean of the college of business at Tech has initiated a fund-raising campaign. One of the selling points he plans to use with potential donors is that increasing the college’s private endowment will improve its ranking among all business schools, as published each year by the magazine, The Global News and Business Report. He would like to demonstrate that there is a relationship between funding and rankings. He has collected the following data, showing the private endowments ($1,000,000) and annual budget (1,000,000s) from state and private sources for eight of Tech’s peer institutions plus Tech, and the ranking of each school.

|  |  |  |
| --- | --- | --- |
| Private Endowment (1,000,000s) | Annual Budget (1,000,000s) | Ranking |
| $2.5 | $8.1 | 87 |
| 52.0 | 26.0 | 20 |
| 12.7 | 7.5 | 122 |
| 63.0 | 33.0 | 32 |
| 46.0 | 12.0 | 54 |
| 27.1 | 16.1 | 76 |
| 23.3 | 17.0 | 103 |
| 46.4 | 14.9 | 40 |
| 48.9 | 21.8 | 98 |

A) using excel, develop a linear regression model for the amount of the private endowment and the ranking and forecast a ranking for a private endowment of $70 million. Does there appear to e a strong relationship between the endowment and the ranking?

B)using excel, develop a multiple regression equation for all these data, including private endowment and annual budget, and forecast a ranking for a private endowment of $70 million and an annual budget of $40 million. How does this forecast compare with the other forecast in part (a)?