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# 2.4 Getting Down to Business:

### A Solidify Understanding Task

Calcu-rama had a net income of 5 million dollars in 2010, while a small competing company, Computafest, had a net income of 2 million dollars. The management of Calcurama develops a business plan for future growth that projects an increase in net income of 0.5 million per year, while the management of Computafest develops a plan aimed at increasing its net income by 15% each year.

- a. Create standard mathematical models (table, graph and equations) for the projected net income over time. (Attend to precision and be sure that each model is accurate and well labeled to show represent the situation.)
- b. Compare the two companies. How are the representations for the net incomes similar? How do they differ? What relationships are highlighted in each representation?
- c. If both companies are able to meet their net income growth goals, which company's net income will eventually be the largest? Why?
- d. When if ever would your projections suggest that the two companies have the same net income? How did you find this? Will they ever have the same net income again?
- e. Since we are creating the models for these companies we can chose to have a discrete, "sequential" model or a continuous model. What are the advantages or disadvantages for each type of model?

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