

## 4.5 Getting Down to Business

### *A Solidify Understanding Task*

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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 Calcu-rama 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.

- Express the projected net incomes in these two business plans as recursive formulas.
- Write an explicit equation for the net income as a function of time for each company's business plan.
- Compare your answers in a and b. How are the two representations similar? How do they differ? What relationships are highlighted in each representation?
- Explain why if both companies are able to meet their net income growth goals, the net income of Computafest will eventually be larger than that of Calcu-rama. In what year will the net income of Computafest be larger than that of Calcu-rama?

