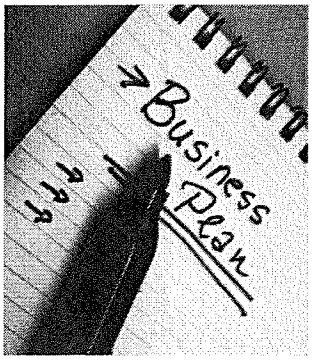
4.5 Getting Down to Business

A Solidify Understanding Task



©2012 www.flickr.com/photos/pretpriemac

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.

a. Express the projected net incomes in these two business plans as recursive formulas.

b. Write an explicit equation for the net income as a function of time for each company's business plan.

c. Compare your answers in a and b. How are the two representations similar? How do they differ? What relationships are highlighted in each representation?

d. 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?