DISCUSSION FOR TENTH TUTORIAL

DATE: MARCH 5, 2012 OR FEBRUARY 12, 2012 : DUE IN TUTORIAL MARCH 19 OR MARCH 26, 2012

A mother leaves money to her children by dividing up the money by giving $1000 to the eldest and 10% of what remains, then $2000 to the second born and 10% of what remains, then $3000 to the third born and 10% of what remains, etc. At the end of this process each child had the same amount and no money was left over. Is it possible to tell how much money there was? Is it possible to tell how many children there were?

Can you start with some fixed amount of money and a number of children and distribute the money by providing an amount and a percentage (as in the first part) in such a way that all children receive the same amount in the end? First try this for 2 children, then for three and then more.

Next think about some different ways to generalize and build on your solution. Can you distribute the percentage first and the amount second? How can you modify this method of distributing money so that the first child gets twice as much the second, the next half again and half again?