Moody's Mega Math Challenge 2006

A contest for high school students in the NYC metropolitan area
m3challenge.siam.org

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Solving the Social Security Stalemate

For decades, there has been a national debate about what must be done to guarantee the long-term solvency of the Social Security system. It seems that almost every president convenes a blue ribbon panel to study the system's problems and recommend solutions to any perceived issues that threaten the viability of the system. Because the issue is politically sensitive, however, these studies have not resulted in actual changes in the Social Security structure or benefits.

Your team has been directed by the Congress to develop a mathematical analysis of the issues, and present one or more approaches that will guarantee the integrity of the system for at least 75 years. Their directive to you is to identify whether the current system is viable, and if it is not, to consider any alternatives that you believe are promising, such as changing the amount of Social Security taxation, modifying the benefit structure, revising the scheduled age for full retirement benefits, or introducing private investment accounts with part of the employee contributions.

To make their evaluation easier, the Congress has asked you to be especially careful to identify all assumptions that underlie your development, and cite the sources for data that you use. A one-page summary of the best alternative(s) that you recommend should identify the critical data that should be collected in future years, to make certain that the changes that are instituted will in fact solve the problem.

Here are two sites that you might find useful:
http://www.ssa.gov/
http://www.cbo.gov/showdoc.cfm?index=5277&sequence=0