MAT102 Critical Thinking Exercise Name_____
Dewey Spring 2009

Loans have grown faster than grants as sources of federal government student financial assistance for a college education. The accompanying table compares the data (in billions of dollars) from the beginning to the end of the 1990s.

	1991	1999
Grants ($ billions)	6.379	8.147
Loans ($ billions)	13.539	32.712

(Source: U.S. Department of Education)

The following functions model the amount of grants and loans (in billions of dollars), where x is the number of years since 1990.

Grants: $G(x) = \sqrt{3.2x + 37.4}$
Loans: $L(x) = 9.75\sqrt{x} + 3.45$

Write an equation to determine the year in which the amount from loans will exceed the amount from grants by $35 billion.

1. Identify: What are you asked to find?

2. Gather: List the information that you need in order to answer the question.

3. Examine: Is there any extra information that you need or information that you don't need? If so what is it?

4. Formulate: What is the formula that you will use to answer the question?

5. Apply: Solve the equation/formula that you wrote in question #4.

6. Evaluate: Does your answer make sense? What are you using to base your decision on?