Your Name: **SCORE:** **/10**

INSTRUCTIONS: Answer the following short-answer questions (in 10 minutes).
GOAL: This reading quiz is designed to illuminate your understanding of the concepts in the first few sections of the book: Euler's Method, Slope Fields, Modeling, Separation of Variables and Classifying Differential Equations.

1. (*2 points.*) An initial value problem consists of two parts. What are they?

2. (*2 points.)* If a differential equation is separable, can you always get a solution? Explain.

3. (*2 points.)* What is Euler's Method used for? Explain.

4. (*2 points.)* Write down an example of an autonomous, 3rd order, nonlinear ordinary differential equation.

5. (*2 points.)* Suppose the amount of money in your bank account after t months is given by $M(t)$ dollars and a deposit of \$100 is made monthly and the money in the account bears interest at 5% per year. Write down a differential equation representing the rate of change of the money in your account with respect to time. (Indicate the units of the quantities you use!)

BONUS (*2 points.)* What questions do you have about this section of the reading? Are there any topics you have seen that you would like to have addressed in class?