NAME _____ SECTION # [ ]

$\frac{\quad}{10}$

1. (3) Solve the initial value problem.

$$\frac{dx}{dt} = x(2-x), \qquad x(0) = 1$$

$x(t) =$

$\lim_{t\to\infty} x(t) =$

2. (2) Use JOde Applet to draw the graph of the solution. Hand in print out.

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3. (5) The half life of C^{14} is 5568 years. How long has some previously living matter been dead if the remains, when found, have only 20% of the original amount of C^{14} they had when the plant was alive? Show your work.

Answer [ ] years.