Chapter 31

Differential Equations

31.1 Introduction to Modeling with Differential Equations

1. (a) $\frac{dM}{dt} = 0.04M$

   (b) $\frac{dM}{dt} = 0.04M + 1000$

2. $\frac{dP}{dt} = kP(N - P)$

3. $\frac{dy}{dt} = k(K - y)$ (see graph)

4. $\frac{dG}{dt} = T - kG$