

Math 216 homework, Prof. Sachs Due, Friday Feb. 10**Short writing conceptual question:**

Consider the general solution of the linear inhomogeneous equation:

$$y' = 2y + e^{kt}$$

for any constant k . Why is $k = 2$ different from the other k values? Try to relate this to some linear algebra and calculus. Explain as well as you can the form of the solution for both cases. **Problems from text:**

Section 1.5: Problems 5, 12 (draw the qualitative picture too, showing equilibria and their stability)

Section 1.8: Problems 9, 12, 16