

Math 216 homework, R. Sachs Due, Wednesday Feb. 22

Short writing conceptual question: Thinking more about the second-order version of our previous thinking problem, consider the differential operator $L = aD^2 + bD + cI$, where D is differentiation with respect to t . We know that $L[e^{rt}] = (ar^2 + br + c)e^{rt}$. Play for a bit more on what use you might make of your result when $ar^2 + br + c \neq 0$. Try to pose some interesting questions, declaring victory even if you can't resolve them after some attempt to do so!

Problems from text:

Section 2.1 (p. 136): Problems 2, 5

Section 2.2 (p. 140): Problems 5, 6 (see remark below problem), 10, 11