Week 9

Monday March 21: *Class 20*:

Advanced Theory of Linear Systems of DEs. We will commence our thorough investigation of linear systems of DEs by summarizing some general theory on the subject.

Reading:

Zill, (Section 8.1 and 8.2)

Homework Set # 8: *(due Friday March 25)*

Zill, Section 8.1: 4*, 5*, 11*, 18* *EXTRA CREDIT 25*

Wednesday March 23 *Class 21*:

Solving Homogeneous Systems of DEs. We continue our study of systems of differential equations by learning about solutions of homogeneous DEs involving generalized eigenvectors.

Reading:

Zill, (Section 8.2 and 8.3)

Homework Set #8: *(due Friday March 25)*

Zill, Section 8.2: 7*, 13*, 20* *EXTRA CREDIT 31, 49*

EXAM 1 Returned

Friday March 25 *Class 22*:

Solving Nonhomogeneous Systems of DEs. We will learn how the techniques we previously used for finding solutions of solving nonhomogeneous DEs with constant coefficients, *the method of undetermined coefficients* and **the method of variation of parameters**, can also be used to solve systems of DEs.

Reading:

Zill, (Section 8.3)

Homework Set # 9: *(due Friday April 1)*

Zill, Section 8.3: 3*, 9*, 11*, 19* *EXTRA CREDIT 32*

Quiz #7

BONUS Quiz #5 online