

Review 2 Math 361

Any term in **bold face** know the definition well enough to state it on the test. The definition you give should be very similar to the one in the book or one with similar detail.

Section 4.2 Reduction of order. $y_2 = y_1(x) \int \frac{e^{-\int P dx}}{y_1^2(x)} dx$.

Sample problems Exercises 1,2,

Section 4.3 **auxiliary equation for second order linear with constant coefficients** , **Euler's formula** be able to derive auxiliary equation pg 133 be able to do all three cases and be able to convert case III from complex to sin and cos 134

Sample problems 6, 33, Example 2,

Section 4.4 method of undetermined coefficients

Sample problems 21, Example 2

Section 4.5 Know the general forms of the 3 different **Annihilator operators**

Sample problems 55,65, example 6

Section 4.6 Variation of parameters

Sample problems 11, example 1

Section 4.7 **auxiliary equation for second order Cauchy-Euler** be able to derive auxiliary equation pg 163 3 cases of roots be able to convert case III from complex to sin and cos pg 165

Sample problems 11, 27, Example 5

Section 4.8.1 **Green's function**

Sample problems 13 Example 3,5

Section 4.9 Solving systems by elimination

Sample problems 1,3,7 Example 1

Section 7.1 **Laplace transform** Be able to use the definition to compute transforms and know those in Theorem 7.1.1

Example 3 Sample problems 27,31

Section 7.2 Inverse Laplace transform. **Theorem 7.2.2**. Know inverses in Theorem 7.2.1

Example 1,4 Sample problems 31, 35