1. **Second-order homogeneous differential equations:**
   Fundamental solution, linear independence, Wronskian.
   
   *Problems: 17-21, 23, 26, 27 (p. 145)*;
   
   *Problems: 1-7, 9-15, 17-23 (p. 156)*

2. **Second-order inhomogeneous differential equations:**
   method of undermined coefficients.
   
   *Problems: 1, 3, 5, 7, 15, 17, 19, 21, 23, 31, 33, 35 (p. 173)*

3. **Linear systems with constant coefficients:**
   Planar systems, general solution and phase portraits for systems of equations whose matrices have real distinct and multiple and complex conjugate eigenvalues, exponential of a matrix; initial-value problems.
   
   *Problems assigned in HW6 and HW7.*