

## Math 454, HW1

- (1) Write the given high order equations as sets of first order equations
  - (a)  $y'' + 2y' + xy = 0$ ;
  - (b)  $x^2y'' - 5xy' + 9y = 0$ ;
  - (c)  $y''' - 2xy'' + 2y + 5 = 0$ .
- (2) (page 36) 2.2.1; 2.2.2; 2.2.3; 2.2.4
- (3) (page 41) 2.4.1; 2.4.2; 2.4.4; 2.4.7