Math 23 Diff Eq: Homework 5

due Wed Oct 26

5.1: 1, 2, 3 (these first three are key), 8 (fun!), 17, 26 (practise playing with the index in sums).

5.2: 2, 3, 15 (for b you could use example matlab code from the plot in HW4).

5.3: 2 (use the method of p. 261, not the usual power series matching of terms. Note $x_0 = 0$), 5, 7 (sketch of complex plane is elegant), 10 (for a, group a_n terms and simplify before equating coeffs in x_n).

5.5: 3, 4 (these amount to applying the solution forms learned, not hard), 13 (can replace plot with labelled sketch if you want).

7.1: 2 (easy), 7 (sketch in the x_1, x_2 plane).

7.2: 2, 9, 13, 14.