Practice Problems for Math 214

The problems are taken from *Differential Equations: An Introduction to Modern Methods & Applications*, by James Brannan and William Boyce, John Wiley & Sons, Inc., 2007.

Section	**Problems**
1.1	1, 2, 7, 9, 11, 13, 15, 16, 17, 21, 22, 23, 24, 25
1.2	1, 2, 5, 7, 11, 22, 23
1.4	1, 2, 3, 4, 5, 7, 8, 9, 11, 15, 17, 19
2.1	1, 2, 3, 4, 8, 10, 13, 15, 18, 22, 30, 31
2.2	1, 2, 3, 4, 7, 9, 21, 22, 23, 24, 31, 32, 33
2.3	1, 2, 3, 4, 7, 8, 9, 10, 13, 16
2.4	1, 2, 3, 4, 5, 7, 8, 10, 11, 22, 23, 25
2.5	1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 18
2.6	1-14, 25-28
3.1	1-8, 13-20
3.2	1-5, 9, 10, 12, 13, 14, 15, 16, 17, 19, 20
3.3	1-24
3.4	1-10
3.5	1-11
4.1	1-4, 6-10, 12-14, 20, 22, 23(for 23, put $\gamma = 4$ and $k = 3$)
4.2	1-3, 7-9, 11, 13, 20-23
4.3	1-16, 19-25 (use the techniques of Chapter 3 to plot the phase portrait of the associated dynamical system), 37-39
4.4	11-15, 17, 18, 21-24, 26 (Same comment as above for section 4.3)
4.6	1-10, 13-17
4.8	10, 14, 15, 17, 18, 19, 22, 23, 24
5.1	1-8, 14, 16, 18, 19
5.2	1-10, 12- 17
5.3	9-21
5.4	1-5
5.5	1, 2, 7-20
5.6	1-7, 9, 11