Differential Equations

Week 9

Monday October 28 : *Worksheet 17*

Linear Systems with Real Eigenvalues. We'll be introduced to a new kind of equilibrium point which is neither a sink or source. It's called a saddle!

Reading:

Blanchard, Section 3.3

Homework #17:

Blanchard, Section 3.3: 3, 4, 7, 8, 20*.

Wednesday October 30 : *Worksheet 18*

Linear Systems with Complex Eigenvalues We continue our march through analyzing all possible kinds of systems of linear ODEs by considering matrices that have complex eigenvalues.

Reading:

Blanchard, Section 3.4

Homework #18:

Blanchard, Section 3.4: 1, 2, 3, 4, 16*, 23*.

Friday November 1 : *Worksheet 19*

Special Cases: Repeated Eigenvalues. We conclude our survey of linear systems of ODEs by considering some of the special cases of matrices with repeated eigenvalues.

Reading:

Blanchard, Section 3.5

Homework #19:

Blanchard, Section 3.5: 3, 4, 9, 10, 12, 18*, 23*

item[ ] Quiz:

Take-Home Quiz #7.