Name. _____

Differential Equations 5420
Midterm Exam 3, Spring 2003
Due Date: April 7, 2003

Instructions. The three problems below are take-home, due on the date above. Answer checks are expected. If `maple` assist is used, then please attach the `maple` output.

1. **(Poincare-Bendixson)** Write a skeletal summary without proofs of the Poincare-Bendixson theorem and its proof. Include definitions and a statement of the Jordan cureve theorem. Some account must appear of how the lemmas are applied to prove the theorem. Generously use references to the Schmitt-Thompson lecture notes, lecture slides and the Wiggins textbook.

2. **()** To be announced.

3. **()** To be announced.