110.302 February 18, 2000
Differential Equations
Summer 1994, JHU

TEST II

Time: 50min

Find the general solution of the following differential equations:

1. $x^2y' - 3xy - 2y^2 = 0$

2. $(y + ycos(xy))dx + (x + xcos(xy))dy = 0$

3. $yy'' = (y')^2$

4. $(y + x)dy = (y - x)dx$

5. $xy' + y = xcosx$

6. Find the shape of the main supporting cable in the Gloden Gate Bridge assuming that the brridge has constant density and the weight of the cables are negligible.

Problems 1 through 5 are worth 8 points, 6 is worth 10.

LaTeX ..... MG