EXAM 1, MATH 267, SPRING 2003

Name, section

Problem 1 Solve the following DE
$y'' + 8y' - 9y = 0$
$y(1) = 1$
$y'(1) = 0.$

Problem 2 Solve the following:
$(y^2 - x)dx + (2xy + y)dy = 0.$

Problem 3 Find a linear DE equivalent to the following:
$y' + y + xy^5 = 0.$

Problem 4 Solve the following DE and express y explicitly as a function of x.
$y' = e^{3x+y}$.

Problem 5 Solve the following DE:
$3y' = e^{x/2} + 6y$.

Problem 6 Solve the following DE:
$xy^2y' = x^3 + y^3$.