

Math 231 fall 2008 homework-Integrating factors.

(1) Use the integrating factors given to find the solutions in implicit form of the equations $\omega = 0$ given below; remember to include the *domain* of the primitive you find for the exact differential. (2) In each case, find the *singular points* of ω . (The problems are from p.90)

1. $\omega = (y^2 - 3xy - 2x^2)dx + (xy - x^2)dy = 0$. int. factor $2x$

2. $\omega = 3(y + x)^2dx + x(3y + 2x)dy = 0$. int. factor x

3. $\omega = e^x(x + 1)dx + (ye^y - xe^x)dy = 0$. Int. factor e^{-y}