QUIZ 4 FOR CALC 4

Name:_____ **RUID:**_____

(1) (−8 pt if not answered) Fill in the blanks above.

(2) (5 pt) Determine if the differential equation

$$[2(x+2y)^2\cos((x+2y)^3)+x^2y]y'+(x+2y)^2\cos((x+2y)^3)+xy^2=0$$

is exact. If it is, solve it.

(3) (2 pt) Find the integrating factor (a function of x) of the following differential equation

$$\left(\frac{y^2}{x^2}+3x\right)-\frac{y}{x}y'=0$$

(4) (1 pt) Solve the equation in (3).