Name:	**ID:**

MATH-260 Term-082 QUIZ-2

1) Classify each differential equation as separable, linear, homogeneous, or Bernoulli. Some equations may be more than one kind. Do not solve

	separable	linear	homog	Bernoulli
$y' = \frac{2xy + 2x}{x^2 + 1}$				
$y' = \frac{3}{x(y+1)}$				
$y' = \frac{3}{y(x+1)}$				
$y' + (\sin x)y = (\cos x)y^{-3/4}$				

2) Find a general solution: $yy'' = 3(y')^2$

3) Verify that the given differential equation is exact; then solve it. $y' = -\dfrac{e^x \sin y + \tan y}{e^x \cos y + x \sec^2 y}$