

NAME: \_\_\_\_\_

Panther ID: \_\_\_\_\_

**Quiz 1**      MAP 2302 - Summer B 2019

1. For each of the following 1st order ODEs determine if it is of one of the types we studied (exact, separable, homogeneous, linear, Bernoulli). Just state the type and put it in the standard form for the type you've chosen, or otherwise briefly explain your answer. You DO NOT have to solve any of them for this quiz (2pts each).

(a)  $x dy + (x^2y + 2y - 3) dx = 0$

(b)  $x^2(y^2 + 1) dx + y(x^3 + 1) dy = 0$

(c)  $(\sin x + \sin y) dx + (y + x \cos y) dy = 0$

(d)  $\frac{dy}{dx} + 4xy = \frac{x}{y^2}$

(e)  $y dx = (4x + 2y) dy$