

NAME: \_\_\_\_\_ ID: \_\_\_\_\_ Section: \_\_\_\_\_

**Exercise 1** (4 points)

Use the method of exact equations to solve the differential equation  $(1 - 2xy)dx - (x^2 - 2y)dy = 0$

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**Exercise 2** (6 points) Use suitable substitutions to solve the differential equation

$$1 + y' + x(x + y) = x(x + y)^2.$$

NAME: \_\_\_\_\_ ID: \_\_\_\_\_ Section: \_\_\_\_\_

**Exercise 1** (4 points)

Use the method of exact equations to solve the differential equation  $(1 - 3x^2y)dx - (x^3 - 2y)dy = 0$

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**Exercise 2** (6 points) Use suitable substitutions to solve the differential equation

$$1 - y' + x(x - y) = x(x - y)^2.$$