

NAME: _____ ID: _____ Section: _____

Exercise 1 (5 points)

Solve the differential equation $(3x^2y - 3\cos(x))dx + (x^3 - 3\sin(y))dy = 0$

Exercise 2 (5 points)

Transform the differential equation $(x^2y - y^2x)dx + (x^3 - y^3)dy = 0$ to a separable equation (**Do not solve the obtained separable equation**)

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Exercise 1 (5 points)

Solve the differential equation $(3xy^2 - \cos(y))dx + (3x^2y + x \sin(y))dy = 0$

Exercise 2 (5 points)

Transform the differential equation $(y^2x - x^2y)dx + (y^3 - x^3)dy = 0$ to a separable equation (**Do not solve the obtained separable equation**)