



## Differential Equations Assignment 5

Determine if each differential equation is exact. If it is exact, solve it, if it not simply say not exact.

(a)  $(2x - 1)dx + (3y + 5)dy = 0$

(b)  $(x^2 - y^4)dx + (x^2 - 4xy)dy = 0$

(c)  $(x^6 + y^6)dx + 6xy^5dy = 0$



## Solutions to Assignment 5

Remember the form of your solutions may vary! Your solution might be correct even though it does not look exactly like the solution listed below.

(a)  $x^2 - x + \frac{3y^2}{2} + 5y = C$

(b) not exact

(c)  $y = \frac{x^7}{7} + xy^6 = C$