University of Annaba–Department of Economy	
First year undergraduation	2008-2009
Analysis	
Supplementary problems	
Differential equations	

**Exercise 1.** Resolve the following differential equations:

- $y' (x^2 + x + 1)y^2 = 0.$  (1)
- **2**.

3.

1.

$$xy' - y = 0. (2)$$

(3)

$$(x^2 - 1)y' - 2xy^2 = 0$$

**Exercise 2.** Resolve the following differential equations: :

- 1. xy' y x = 0. (4)
- 2.  $x^2y' xy = y^2$ . (5)

**Exercise 3.** Resolve the following differential equations:

1.

$$y'' + 4y' + 4y = 0. (6)$$

- 2. 2y'' + 3y' 5y = 0.(7)
- 3.

$$y'' + 2y' + 3y = 0. ag{8}$$