

## Continuous assessment

### Test N° 2

**Exercise: (./8pts)** Solve the following differential equations

1.  $(1-x)y' - xy = 0$ , with  $y > 0$ ,  $x < 1$  and  $y(0) = 1$ .

2.  $xy' - y = x^3e^{2x}$ , with  $y > 0$  and  $x > 0$ .

3.  $y'' - y' - 6y = x + e^x + e^{3x}$ .

***Good luck***