Act 2: **Linear differential equations**

Make a report where you solve the linear the differential equations in the following table.

	Differential Equation	Initial Condition
1	$y' - \dfrac{y}{x} = x^4$	
2	$xy' - 2y = 3x^2 + 2x$	
3	$y' + y = e^{-x}$	$y(0) = -\dfrac{1}{4}$
4	$y' = x - y$	$y(0) = -1$
5	$dy + (3x^2y - x^2)dx = 0$	