1. Complex Exponentials: Simply the following expression and give your answer both in polar and rectangular form.
   - $c = 3e^{j\pi/4} + 4e^{-j\pi/2}$

2. Difference Equations: Solve the following difference equation using recursion by hand (for n=0 to n=4)
   - $y[n] + 0.5y[n-1] = 2x[n-1]$; $x[n] = \delta[n]$, $y[-1] = 0$

3. Differential Equations: Solve the following problem for y(t).
   - $dy/dt + 2y(t) = 2x(t)$; $x(t) = u(t)$, $y(0) = -1$