Given the following $x[n]$, and the following difference equation, compute and sketch the output function, $y[n]$.

$x[n] = 2(u[n] - u[n-3])$

$4y[n+1] - 3x[n+1] = 2y[n]$
Compute and sketch the $h[n]$ response for the following difference equation.

$$3y[n + 1] - 2y[n] + 3x[n - 1] = 0$$
Convert the following differential equation into a difference equation. Use a sampling period of $T=0.001$ sec.

\[
\frac{d}{dt} y(t) - 2y(t) = 4x(t) - 2 \frac{d}{dt} x(t)
\]