EE3054 - Homework 2 - Due Sep. 16 2005

Classify the following systems as linear/nonlinear, causal/noncausal, and time invariant/time varying (and give reasons):

1. \( y[n] = x[n] + \sin(x[n - 1]) \)
2. \( y[n] = x[n] + x[n - 1] + n(x[n + 2])^3 \)
3. \[
   y[n] = \sin(x[n]) \cos(x[n - 1]) + \sin(x[n - 1]) \cos(x[n]) \\
   - \sin(x[n] + x[n - 1]) + x[n + 2]
\]