UIN: _____

Name: _____

1. (5 pts) Compute the DTFT of $x[n] = n(-\frac{1}{3})^n u[n-2]$.

2. (5 pts) Let $x[n]$ be a signal with DTFT $X_d(\omega)$.

   (a) Find an expression for the DTFT of $y[n] = x[n]\cos\left(\frac{3\pi}{4}n\right)$ in terms of $X_d(\omega)$.

   (b) Suppose $X_d(\omega)$ is as shown below. Sketch the DTFT of $y[n]$. Label the axes and "important points" on your sketch.