## PROBLEM:

For the chirp signal

$$x(t) = \Re e\{e^{j\theta(t)}\} = \cos(2\pi(\alpha t^2 + \beta t + \phi))$$

(a) Determine values for $\alpha$, $\beta$, and $\phi$, so that the instantaneous frequency of $x(t)$ will start at 3800 Hz and end at 800 Hz over the time interval $0 \leq t \leq 3$ seconds.

(b) Make a plot of the (instantaneous) frequency versus time over the range $0 \leq t \leq 3$ sec.