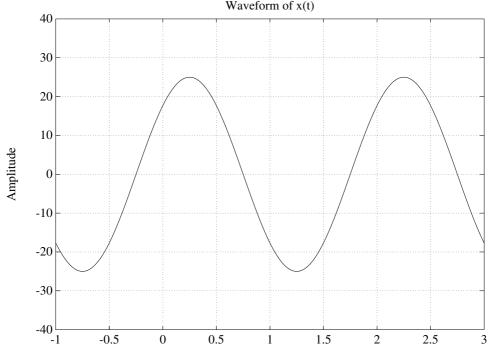
PROBLEM:

(a) Consider the complex signal z(t) = Ze^{j2t}. Show that the second derivative of z(t) with respect to time can be represented as \(\bar{z}(t) = Qe^{j2t}\) and determine an expression for \(Q\) in terms of \(Z\).
(b) If \(Z\) is as plotted in the figure below, plot the corresponding phasor \(Q\) for the derivative.

Waveform of x(t)



Time in msec