

PROBLEM:

The “spectrum” diagram gives the frequency content of a signal.

- (a) Draw a sketch of the spectrum of $x(t)$ which is “sine-times-cosine”

$$x(t) = \sin(500\pi t) \cos(700\pi t)$$

Label the frequencies and complex amplitudes of each component.

- (b) Determine the minimum sampling rate that can be used to sample $x(t)$ without any aliasing.