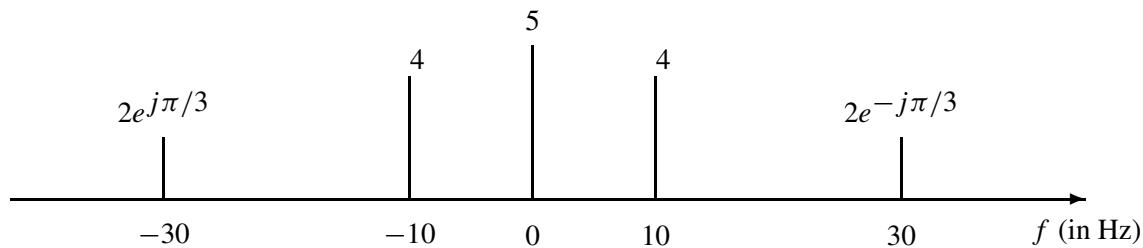


PROBLEM:

A signal $x(t)$ has the two-sided spectrum representation shown below.



- (a) Write an equation for $x(t)$.
- (b) Is the signal $x(t)$ periodic? If so, what is the period?
- (c) The signal $x(t)$ is sampled with sampling frequency $f_s = 1/T_s = 50$ samples/second to obtain the discrete-time signal $x[n] = x(nT_s)$. Write an equation for $x[n]$ and plot the spectrum of $x[n]$ for normalized frequencies $-\pi \leq \hat{\omega} \leq \pi$.

