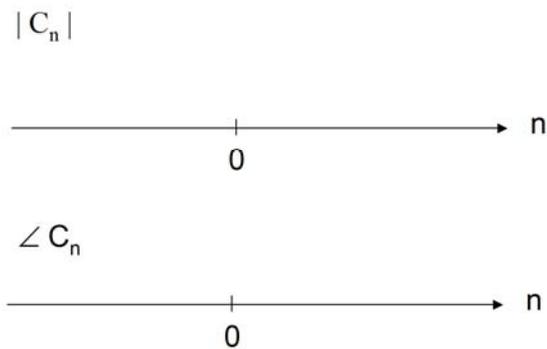


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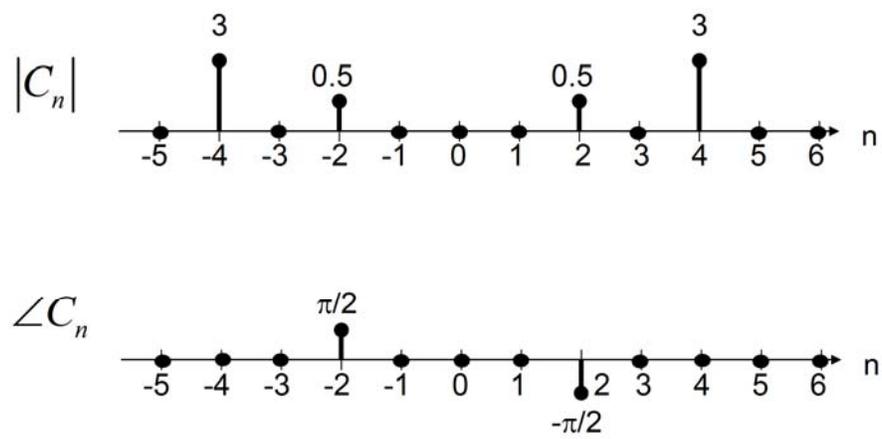
EE432 Fall 2008 Quiz 04

1. Given that $x(t) = 2 \cos(2\pi 60t)$, what are the Fourier series coefficients C_n ? Plot the magnitude and phase of the coefficients below:



2. Write $\sin(2\pi 40t)$ as a sum of complex exponentials.
3. What is the Fourier transform of $x(t) = 2$?
4. What is the Fourier transform of $\text{rect}(t)$?
5. What is the Fourier transform of $\text{rect}(2t)$?

6. Given the plot of the magnitude and phase of the Fourier series of a signal below, find the signal.



Bonus: Who was the general who lead elephants into Italy to invade Rome?