	ı
\ \ \ \	
1/1/201	in His .
May	170000
	ization.

Real

X(t)=

Complex

X(t)=

$$\chi(\frac{1}{3}) =$$

X(==)=

$$\chi(\pi) =$$

 $\chi(\pi) =$

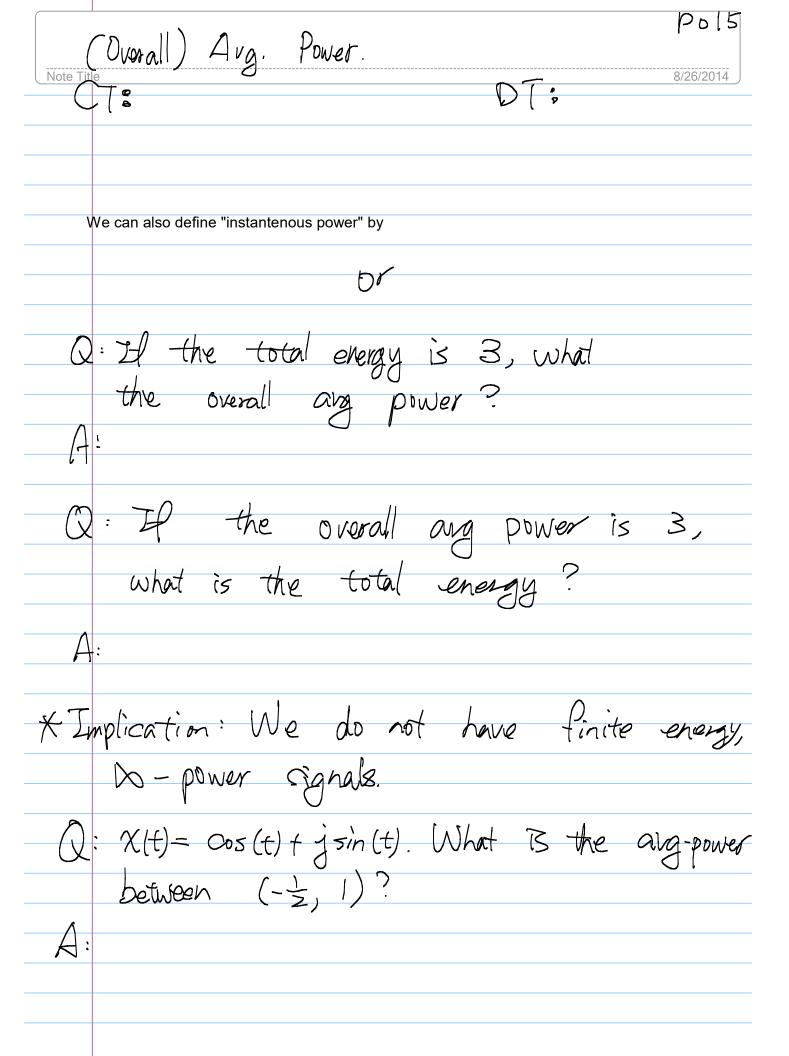
Visualization

冬

Classification #2: By energy

& by p

*	Definition: Energy for CT signals
	Energy between (t, t) interval is
	_
	For DT signals:
	Energy between [n, nz] interval is
	(Area gay 10000 real 211) reg (received 15
(Total Energy (between (-10, 00))
• A	vg power between (ti,ti) between [n1,n2]



X	Let us briefly digress to the "algebra of
	signals"
	- Signals are just functions. So given
	two signals XI, XI (can be Xitt) XI(t) We can write,
	New signals Uld signals
	$= \chi_1 + \chi_2$ means $y(t) = \chi_1(t) + \chi_2(t)$ for
	means $y(t) = \chi_1(t) + \chi_2(t)$ for
	all t.
	$0 y = \alpha x_1 \Rightarrow y \cdot n_1 = \alpha x_1 \cdot n_1$ for all n
	$9 = \chi_1 \cdot \chi_2 \implies g(t) = (\chi_1(t)) \cdot (\chi_2(t))$
•	These operations are used/implemented quite ofton in a real system. Ex:
7	4