

Practice Quiz
September 1, 2006

1. Let

$$x(t) = \frac{1}{\sqrt{|t|}}u(t-1).$$

- (a) Determine power and energy of $x(t)$.
- (b) Sketch the even and odd parts of $x(t)$.

2. Determine whether $\sin t + \cos \sqrt{2}t$ is periodic. If yes, determine its fundamental period.

3. Prove

$$\int_{-T}^T x(t)dt = 2 \int_0^T x_e(t)dt. \quad (1)$$

4. *Bonus question.* What is the corresponding DT relationship to (1)?