King Fahd University of Petroleum \& Minerals
Electrical Engineering Department
EE207: Signals \& Systems (111)
Quiz 1: Signals \& Systems Modeling Concepts

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Ver. 1

Evaluate the following integral $\int_{-1}^{\infty} \cos (2 \pi t) \delta(t-2) d t$
(2 points)
$=\cos (2 \pi 2)=\cos (4 \pi)=1$

What is the fundamental period of the given signal? (Assume units of seconds for the $t$-variable)

$$
g(t)=\cos (2 t)+\sin (4 t)
$$

(2 points)
$\omega_{1}=2, \omega_{2}=4, \omega$ for the sum=2
$f$ for the sum $=\omega / 2 \pi=1 / \pi$
$T=1 / f=\pi$ seconds

Find the energy and power of the following signal $x(t)$
(3 points)

## $\mathrm{P}=0$ (Finite Energy)

$\mathrm{E}=$ Area under the squared of the curve $=4$


Is it an energy signal or power signal? Energy

Sketch $\quad-2 \Pi(1-2 t)$.
$=-2 \Pi(-2(t-1 / 2))$.


