

HW9Q85 Problem 4.18

Note Title

10/26/2014

$$\text{Q: } H(j\omega) = \frac{\sin^2(3\omega) \cos(\omega)}{\omega^2} \quad \text{Find } h(t).$$

$$\text{Ans. Q1: } H_1(j\omega) = \frac{\sin(3\omega)}{\omega} \quad \text{Q} = h_1(t) ?$$

$$\text{Q2: } H_2(j\omega) = \frac{\sin^2(3\omega)}{\omega^2} \quad \text{Q} = h_2(t) ?$$

Ans:

$$\text{Q3: } H_3(j\omega) = \frac{\sin^2(3\omega)}{\omega^2} \cdot \frac{1}{2} (e^{j\omega} + e^{-j\omega})$$

