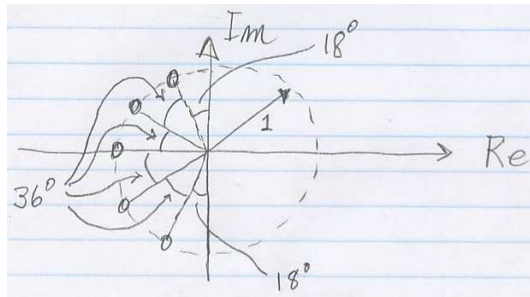


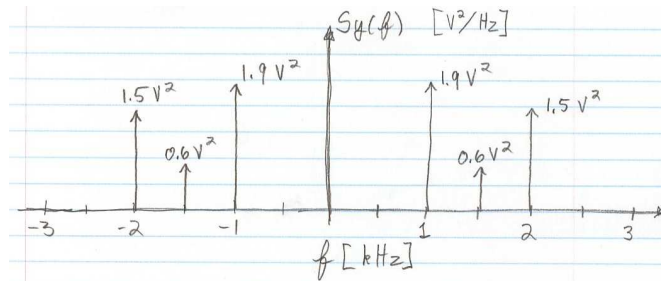
Answers to EEE311 Second Midterm AY2018-2019

1. (a) $x(3.5 \text{ ms}) = -0.1050928$.
 (b) $z(t)$ contains frequency components above 500 Hz and in this case violates Nyquist's sampling criterion.
- 2.



3. $H(s) = \frac{s^3}{s^3 + 4s^2 + 8s + 8}$.

4.



5. (a)

$$P(r_0) = 0.45$$

$$P(r_1) = 0.3$$

$$P(r_2) = 0.25$$

(b)

$$P(m_0|r_1) = 1/3$$

$$P(m_1|r_1) = 2/3$$

$$P(m_2|r_1) = 0$$