

EE 451 – HW3

- 6.8.** R1: $0 < |z| < 0.3$, R2: $0.3 < |z| < 0.6$, R3: $0.6 < |z| < 2$, R4: $|z| > 2$
- 6.24** (a) $x_1[n] = \frac{1}{3}\mu[n] + \frac{1}{3}(-\frac{1}{2} - j\sqrt{3}/2)\mu[n] + \frac{1}{3}(-\frac{1}{2} + j\sqrt{3}/2)\mu[n]$
(b) $x_2[n] = \frac{1}{4}\mu[n] + \frac{1}{4}(-1)^n\mu[n] + \frac{2}{4}(-1)^n\mu[n] + \frac{1}{4}(j)^n\mu[n]$
- 6.37** $\{-2.62 - 12.23z^{-1} - 9.24z^{-2} + 1.22z^{-3} + 0.63z^{-4}\}$
- 6.43** $h[n] = \frac{4}{3}(0.4)^n\mu[n] + \frac{2}{3}(-0.2)^n\mu[n]$
- 6.55** $H(z) = U(z)/X(z) = 1 - P(z)$, $G(z) = 1/(1 - P(z))$
(a)(b) For any value of $P(z)$ the above equation holds. $G(z) = H^{-1}(z)$