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$$H(z) = \frac{5}{(1-0.8z^{-1})(1-0.7z^{-1})}$$

$$H(z) = \frac{A}{(1-0.8z^{-1})} + \frac{B}{(1-0.7z^{-1})}$$

$$5 = A(1-0.7z^{-1}) + B(1-0.8z^{-1})$$

① $z = 0.7$

$5 = B(1-0.8(0.7)^{-1})$

$5 = B(-\frac{1}{7})$

$35 = -B$

$B = -35$

② $z = 0.8$

$5 = A(1-0.7(0.8)^{-1})$

$5 = A(0.125)$

$A = 40$

$$H(z) = \frac{40}{(1-\frac{8}{10}z^{-1})} - \frac{35}{(1-\frac{7}{10}z^{-1})}$$

$$H(n) = 40\left[\left(\frac{8}{10}\right)^n - 35\left(\frac{7}{10}\right)^n\right]u(n)$$

$y(n) = x(n) * h(n)$

$$\delta(n) = \left[40\cdot\left(\frac{8}{10}\right)^n - 35\left(\frac{7}{10}\right)^n\right]u(n)$$ #