(1.2) $y[n]-0.8y[n-1]=x[n]+2x[n-1]$

$Y(z)-0.8z^{-1}Y(z)=X(z)+2z^{-1}X(z)$

$(1-0.8z^{-1})Y(z)=(1+2z^{-1})X(z)$

$$H(z)=\frac{Y(z)}{X(z)}=\frac{1+2z^{-1}}{1-0.8z^{-1}}$$

(pole) $1-0.8z^{-1}=0 \Rightarrow z=0.8$

(zero) $1+2z^{-1}=0 \Rightarrow z=-2$

(R.O.C) $|z|>0.8$

(1.3) $x[n]=(0.7)^n u[n]$

$a^n u[n] \leftrightarrow \frac{1}{1-az^{-1}}, |z|>|a|$

$a=0.7$

$$X(z)=\frac{1}{1-0.7z^{-1}}$$

(pole) $1-0.7z^{-1}=0$

$\Rightarrow z=0.7$

(ROC) $|z|>0.7$

(1.4) $x[n]=-(0.7)^n u[-n-1]$

$-a^n u[-n-1] \leftrightarrow \frac{1}{1-az^{-1}}, |z|<|a|$

$a=0.7$

$$X(z)=\frac{1}{1-0.7z^{-1}}$$

(pole) $\Rightarrow z=0.7$

(ROC) $|z|<0.7$

(1.9) $$H(z)=\frac{1}{(1-0.5z^{-1})(1-2z^{-1})}$$

$1-0.5z^{-1}=0 \Rightarrow z=0.5$

$1-2z^{-1}=0 \Rightarrow z=2$

1) $|z|<0.5$ ×

2) $0.5<|z|<2$

3) $|z|>2$ ×

BIBO

$|z|=1$

$\therefore 0.5<1<2$