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$$H(Y)+H(X,Y,Z)-H(X,Y)-H(Y,Z)=\sum_{x,y,z} p(x,y,z)\log\left(p(x,y)p(y,z)/p(y)p(x,y,z)\right) \tag{1}$$

$$\leq \frac{1}{\ln 2}\sum_{x,y,z} p(x,y,z)\left[1-p(x,y)p(y,z)/p(y)p(x,y,z)\right] \tag{2}$$

$$=\frac{1-1}{\ln 2}=0 \tag{3}$$

The equality occurs if and only if $p(x,y)p(y,z)/p(y)p(x,y,z)=1$, which means a Markov chain condition of $Z\rightarrow Y\rightarrow X$,which is $p(x|y)=p(x|y,z)$

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