

Quiz 9. $\begin{array}{c|cc|cc} y & 6 & 7 & 8 & 9 & 13 \\ \hline \end{array}$

663020281-6 စိုးလွင်လွင်

မူလ

$$\text{Info}(D) = I(3,2) = -\frac{3}{5} \log \frac{3}{5} - \frac{2}{5} \log \frac{2}{5} = 0.971$$

$$\text{Info}_{\text{ကွဲ}(D)} = \frac{1}{5} I(0,1) + \frac{4}{5} I(3,1)$$

$$= \frac{1}{5} \left(-\frac{0}{1} \log \frac{0}{1} - \frac{1}{1} \log \frac{1}{1} \right) + \frac{4}{5} \left(-\frac{3}{4} \log \frac{3}{4} - \frac{1}{4} \log \frac{1}{4} \right)$$

$$= 0 + \frac{4}{5} (0.811)$$

$$= 0.6488$$

$$\text{Gain}(\text{မူလ}) = 0.971 - 0.6488 = 0.3222$$

$$\text{Info}(D) - \text{Info}_{\text{ကွဲ}(D)}$$

မူလ

$$\text{Info}(D) = I(3,2) = -\frac{3}{5} \log \frac{3}{5} - \frac{2}{5} \log \frac{2}{5} = 0.971$$

$$\text{Info}_{\text{ကွဲ}(D)} = \frac{3}{5} I(1,2) + \frac{2}{5} I(2,0)$$

$$= \frac{3}{5} \left(-\frac{1}{3} \log \frac{1}{3} - \frac{2}{3} \log \frac{2}{3} \right) + \frac{2}{5} \left(-\frac{2}{2} \log \frac{2}{2} - \frac{0}{2} \log \frac{0}{2} \right)$$

$$= \frac{3}{5} (0.918) + 0$$

$$= 0.551$$

$$\text{Gain}(\text{မူလ}) = 0.971 - 0.551 = 0.42$$

$$\text{Info}(D) - \text{Info}_{\text{ကွဲ}(D)}$$

အဖြေ $\text{Gain}(\text{မူလ}) > \text{Gain}(\text{ကွဲ}) = \text{မူလ}$