

Class 5 - Functions

Saturday, April 19, 2025 10:27 AM

Binary - $\begin{cases} 0110 \rightarrow 6 \\ 110 \rightarrow 6 \\ 1010 \rightarrow 10 \end{cases}$

$\begin{matrix} 3 & 2 & 1 & 0 \\ 2 & 2 & 2 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 0 & 1 & 0 \end{matrix} \rightarrow 10$ decimal

$(1 \times 2^3) + (0 \times 2^2) + (1 \times 2^1) + (0 \times 2^0)$

$\Rightarrow \begin{matrix} 3 & 2 & 1 & 0 \\ 2 & 2 & 2 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 1 & 1 & 1 \end{matrix} \rightarrow (1 \times 2^3) + (1 \times 2^2) + (1 \times 2^1) + (1 \times 2^0)$

$\Rightarrow \begin{matrix} 3 & 2 & 1 & 0 \\ 2 & 2 & 2 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 1 & 0 & 1 & 0 \end{matrix} \rightarrow 10$

$\Rightarrow \begin{matrix} 3 & 2 & 1 & 0 \\ 2 & 2 & 2 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 0 & 0 & 0 \end{matrix} = 6$

$\begin{matrix} 3 & 2 & 1 & 0 \\ 2 & 2 & 2 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 1 & 0 \end{matrix} \rightarrow$

$(1 \times 2^2) + (1 \times 2^1) + (0 \times 2^0)$

$\begin{matrix} 4 & 3 & 2 & 1 & 0 \\ 2 & 2 & 2 & 2 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 1 & 0 & 1 & 0 \end{matrix}$

$(2^4) + (2^3) + (2^1) + 0$