How many bit flips are req to convert a no. to another.

$2\cancel{q} \rightarrow \underline{1}\,1\,1\,0\,\underline{1}$ $15 \rightarrow \underline{0}\,1\,1\,1\,\underline{1}$

ans $\uparrow$ 2

What we can do is XOR both numbers

$$\begin{array}{c} 1\,1\,1\,0\,1 \\ 0\,1\,1\,1\,1 \\ \hline 1\,0\,0\,1\,0 \end{array}$$

→ This will give the points on positions where they differ

Now to count set bits use the algo

$(n \& (n-1)) \rightarrow$ till is zero → it will give no. of set bits.