$$\begin{array}{c} a \\ b \ge 0 \\ c \ge 0 \\ rl \end{array}$$

$$r - l = 2^b - 2^{-c}$$

$$r - l = 2^{b-1} - 2^{-c} + 2^{b-1} = 2^b - 2^{-c}$$