

$$\begin{array}{l}
 1) \quad 12 : 2 = 6 \quad R 0 \\
 \quad \quad 6 : 2 = 3 \quad R 0 \\
 \quad \quad 3 : 2 = 1 \quad R 1 \\
 \quad \quad 1 : 2 = 0 \quad R 1
 \end{array}$$

$$\begin{array}{l}
 \text{Dezimal} \quad \text{Binär} \\
 12 \hat{=} \underline{1100}
 \end{array}$$

$$\begin{array}{l}
 2) \quad 15 : 2 = 7 \quad R 1 \\
 \quad \quad 7 : 2 = 3 \quad R 1 \\
 \quad \quad 3 : 2 = 1 \quad R 1 \\
 \quad \quad 1 : 2 = 0 \quad R 1
 \end{array}$$

$$\begin{array}{l}
 \text{Dezimal} \quad \text{Binär} \\
 15 \hat{=} \underline{1111}
 \end{array}$$

$$\begin{array}{l}
 3) \quad 1 \ 0 \ 0 \ 1 \ 1 \\
 \quad \quad \overset{1}{1} \ \overset{0}{0} \ \overset{0}{0} \ \overset{1}{1} \ \overset{1}{1} \\
 \quad \quad 1 \cdot 2^4 \quad \quad 1 \cdot 2^1 \ 1 \cdot 2^0
 \end{array}$$

$$\begin{array}{l}
 \text{Binär} \quad \text{Dezimal} \\
 10011 \hat{=} 19
 \end{array}$$

$$1 \cdot 16 + 1 \cdot 2 + 1 \cdot 1 = \underline{19}$$