

Base 10 \rightarrow 2:

$$127 \rightarrow \max = 2^6 = 64 \rightarrow 127 - 64 = 63 \rightarrow \max = 2^5 = 32 \rightarrow 63 - 32 = 31 \rightarrow \max = 2^4 = 16 \rightarrow 31 - 16 = 15 \rightarrow \max = 2^3 = 8 \rightarrow 15 - 8 = 7 \rightarrow \max = 2^2 = 4 \rightarrow 7 - 4 = 3 \rightarrow \max = 2^1 = 2 \rightarrow 3 - 2 = 1 \Rightarrow \max = 2^0 = 1 \rightarrow 1 - 1 = 0$$

Base 2: $\underline{1} \ \underline{1} \ \underline{1} \ \underline{1} \ \underline{1} \ \underline{1} \ \underline{1}$
 Base 8: $\underline{1} \quad \underline{7} \quad \underline{7}$

Base 2: $\underline{1} \ \underline{1} \ \underline{1} \ \underline{1} \ \underline{1} \ \underline{1} \ \underline{1}$
 Base 16: $\underline{7} \quad \underline{F}$

Base 2: 111111
 Base 8: 177
 Base 16: 7F

Base 2 \rightarrow Base 10:

$$10101 = 1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \rightarrow 10101 = 16 + 4 + 1 = 21_{10}$$

Base 10: $\boxed{21}$
 Base 8: 25
 Base 16: 15

Base 2: $\underline{1} \ \underline{0} \ \underline{1} \ \underline{0} \ \underline{1}$
 Base 8: $\underline{2} \ \underline{5}$

Base 2: $\underline{1} \ \underline{0} \ \underline{1} \ \underline{0} \ \underline{1}$
 Base 16: $\underline{1} \ \underline{5}$

Base 8 \rightarrow Base 10:

$$71 = 7 \times 8^1 + 1 \times 8^0 = 56 + 1 = 57$$

Base 8: $\underline{7} \ \underline{1}$

Base 2: $\underline{1} \ \underline{1} \ \underline{1} \ \underline{0} \ \underline{0} \ \underline{1}$

Base 10: 57
 Base 2: 71
 Base 16: 39

Base 2: $\underline{1} \ \underline{1} \ \underline{1} \ \underline{0} \ \underline{0} \ \underline{1}$

Base 16: $\underline{3} \ \underline{9}$

Base 16 \rightarrow Base 10:

$$AB = 10 \times 16^1 + 11 \times 16^0 = 160 + 11 = 171$$

Base 16: $\underline{A} \ \underline{B}$

Base 2: $\underline{1} \ \underline{0} \ \underline{1} \ \underline{0} \ \underline{1} \ \underline{0} \ \underline{1} \ \underline{1}$

Base 2: $\underline{1} \ \underline{0} \ \underline{1} \ \underline{0} \ \underline{1} \ \underline{0} \ \underline{1} \ \underline{1}$

Base 8: $\underline{2} \ \underline{5} \ \underline{3}$

Base 10: 171
 Base 2: 10101011
 Base 8: 253