

Solution to L#2 Review Questions

1. Specify the value of the digit 3 in the following numbers:

$$36_8 : 3 \times 8^1 = 24$$

$$36_{10} : 3 \times 10^1 = 30$$

$$36_{16} : 3 \times 16^1 = 48$$

2. Convert the following numbers to their equivalent decimal number:

$$\begin{aligned} B5_{16} &= B \times 16^1 + 5 \times 16^0 \\ &= 11 \times 16 + 5 \times 1 \\ &= 176 + 5 \\ &= 181_{10} \end{aligned}$$

$$\begin{aligned} 10110101_2 &= 1 \times 2^7 + 0 \times 2^6 + 1 \times 2^5 + 1 \times 2^4 \\ &\quad + 0 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \\ &= 128 + 0 + 32 + 16 + 0 + 4 + 0 + 1 \\ &= 181_{10} \end{aligned}$$