Homework 1

Exercise 1

11101111011100110002 = 1 \* 23 + 1 \* 24 + 1 \* 27 + 1 \* 28 + 1 \* 29 + 1 \* 211 + 1 \* 212 + 1 \* 213 + 1 \* 214 + 1 \* 216 + 1 \* 217 + 1 \* 218 = 8 + 16 + 128 + 256 + 512 + 2048 + 4096 + 8192 + 16384 + 65536 + 131072 + 262144 = 49039210

Exercise 2

543210 = 10101001110002

5432 – 4096 = 1336, 1336 – 1024 = 312, 312 – 256 = 56, 56 – 32 = 24, 24 – 16 = 8, 8 – 8 = 0.

1 0 1 0 1 0 0 1 1 1 0 0 0

4096 2048 1024 512 256 128 64 32 16 8 4 2 1

Exercise 3

BAB916 = 9 \* 160 + 11 \* 161 + 10 \* 162 + 11 \* 163 = 9 + 176 + 2560 + 45056 = 4780110