**Exercise: Number System**

1. **Convert decimal to binary, octal, hexadecimal**
2. (11)10 = (?)2 = (?)8 = (?)16
3. (255)10 = (?)2 = (?)8 = (?)16
4. **Conversion between binary, octal and hexadecimal**
5. (777)8 = (?)2 = (?)16
6. (122)8 = (?)2 = (?)16
7. (AA)16 = (?)2 = (?)8
8. (11100001)2 = (?)8 = (?)16
9. **Convert binary, octal, hexadecimal to decimal**
10. (101)2 = (?)16 = (?)8 = (?)10
11. (1110)2 = (?)16 = (?)8 = (?)10
12. (1000 0001)2 = (?)16 = (?)8 = (?)10
13. (1001 1001)2 = (?)16 = (?)8 = (?)10
14. (1.11)2 = (?)10
15. (14.6)8 = (?)10
16. **Conversion from** **Decimal**

**Note: If the fractional part exceeds 4 digits, only 4 digits are reserved.**

1. (0.5)10 = (?)2 = (?)8 = (?)16
2. (1.25)10 = (?) 2= (?)8 = (?)16
3. (0.35)10 = (?) 2= (?)8 = (?)16
4. (0.88)10 = (?)2 = (?)8 = (?) 16
5. **Arithmetic**
6. (1234)8 + (4576)8 = (?)8
7. (A1)16 \* (6B)16 = (?)16
8. **Two’s Complement**
9. (?) is the bit pattern in 8-bit 2’s complement representation for decimal number -40.
10. The smallest negative integer for n-bit 2’s complement representation is (?).
11. Decimal (?) is equivalent to 8-bit 2’s complement number 10010101.
12. **Floating-Point Numbers**
13. (?) is the floating-point representation of decimal 0.125.
14. (?) is the floating-point representation of decimal -127.125.
15. 1 10000010 10100000000000000000000 is the floating-point representation of decimal (?).
16. 1 10000010 11100100000000000000000 is the floating-point representation of decimal (?).
17. 0 10000110 11011001000000000000000 is the floating-point representation of decimal (?).