Worksheet 2

Try to solve these problems by hand first before checking your answers using Python.

1. Convert these binary numbers to decimal (base 2 to base 10):
   a) 10101010_2 b) 11110000_2 c) 0_2

2. Convert these decimal numbers to binary (base 10 to base 2):
   a) 3000_{10} b) 2048_{10}

3. Check your answers above using Python.

4. Convert these binary numbers to hexadecimal (base 2 to base 16):
   a) $1111\ 1110\ 1110\ 1101\ 1011\ 1110\ 1110\ 1111_2$ b) $1100\ 0000\ 1111\ 1110\ 1110_2$

5. Convert this hexadecimal numbers to binary (base 16 to base 2):
   $DECAF123_{16}$

6. Check your answers above using Python.

7. Find the character with ASCII code 73.

8. Convert the letter A into its ASCII code.

9. What do the ASCII codes 97, 115, 99, 105, and 105 spell?

10. Check you answers above using Python.