Add a few explanations to demonstrate how to perform each conversion. For example, from decimal to binary we use powers and then explain the corresponding operations.

- Convert from decimal to binary:
    - 234- 11101010
    - 555- 1000100011
    - 12321-11000000100001
    - 152- 10011000
    - 32768- 1000000000000000

- Convert from binary to decimal:
    - 100000000-256
    - 1011110100-4+16+32+64+128+512=756
    - 10011101- 0+4+8+16+128=156
    - 11111111111-1+2+4+8+16+32+64+128+256+512+1024=2047

- Convert from hexadecimal to binary:
    - 45A0 -0100|0101|1010|0000
    - CF -1100|1111
    - AAB2- 1010|1010|1011|0010
    - 3020 -11|0000|0010|0000

- Convert from binary to hexadecimal:
    - 110001000 -188
    - 100010110 - 116

- Complete the following conversions related to octal numeral system:
    - Convert the numbers from exercise 4 to octal.
        - 610
        - 426
    - Convert the octal 3020 to binary.
        - 110000100000

- Fill in the gaps, using all the conversions you need. You have to write the steps to transform each number.

BINARY	DECIMAL	HEXADECIMAL	OCTAL
100001	33	21	41
11111111	1515	FF	377
11111111	1515	FF	377
10 0001	33	21	41

- How many bits do you need to represent the following numbers in binary? How bits?

- hexadecimal: 4B, 4AA, FF4FA, 345F
    - 4b -01001011- 1 byte-7bits
    - 4aa-010010101010- 2bytes-11bites
    - FF4FA-11111111010011111010-3bytes-20 bites
    - 345F-0011010001011111-2bytes -24 bites

- decimal: 100, 256, 255, 32, 31, 3, 4350, 1024, 45, 2^{30}, 63
    - 100-1100100-1 byte-7bites
    - 256-100000000-2bytes-9bites
    - 255-11111111-1byte-8bites
    - 32-100000-1byte-6bites
    - 31-11111-1bytes-5bites
    - 3-11-1byte-2bites
    - 4350-11010011-1byte-8bites
    - 1024-10000000000-2bytes-11bites
    - 45-1000001-1byte-7bites
    - 2^30-1^33-
    - 63-111111-1byte-6bites

- Solve the following parts using ASCII extended (8 bits).
    - Write a random text, which contains letters, numbers and other alphanumeric characters.
        - Hell%, my n#me 1s Z03
    - Encode to hexadecimal, according ASCII table.
        - 48 65 6C 6C 25 2C 20 6D 79 20 31 73 20 7A 30 33
    - Convert to binary.
        - 0100100001100101011011000110110001001010010110000100000 0011011010111100100100000000110001011100110010000001111010 0011000000110011