

Homework 1

CMP 405 & CMP 743: Introduction to Networks

Fall 2021

This assignment is due by 11:59 PM on Thursday 09/02/2021.

Late submission will not be accepted.

1. Convert the following base 10 numbers to binary. Your answers must be expressed as 8-bit binary values:

- a) 89_{10}
- b) 53_{10}
- c) 154_{10}
- d) 241_{10}
- e) 253_{10}

2. Convert the following base 16 (Hexadecimal) numbers to base 10:

- a) CD_{16}
- b) EB_{16}
- c) DA_{16}
- d) $F2_{16}$
- e) EE_{16}

3. Convert the following base 2 (binary) numbers to base 10:

- a) $(1110\ 1111)_2$
- b) $(1010\ 1011\ 1110\ 1001)_2$
- c) $(1011\ 1101\ 1010\ 1101\ 1010\ 0011)_2$
- d) $(1001\ 1011\ 1100\ 0011\ 1100\ 0111)_2$
- e) $(1010\ 1100\ 0101\ 1011\ 0011\ 1101\ 0111\ 1010)_2$

4. Convert the following base 2(binary) numbers to base 16:

- a) $1110\ 1111)_2$
- b) $(1010\ 1011\ 1110\ 1001)_2$
- c) $(1011\ 1101\ 1010\ 1101\ 1010\ 0011)_2$
- d) $(1001\ 1011\ 1100\ 0011\ 1100\ 0111)_2$

e) $(1010\ 1100\ 0101\ 1011\ 0011\ 1101\ 0111\ 1010)_2$