

- [CPSC 275: Introduction to Computer Systems](#)

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Fall 2025

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# Solution to Homework 6

1. A. 11111100  
B. 01110000

2. Smallest (100000) and largest (011111)

3.

Hex	Bin	BinToUnsigned	BinToSigned
0xE	1110	$2^3 + 2^2 + 2^1 = 14$	$-2^3 + 2^2 + 2^1 = -2$
0x0	0000	0	0
0x5	0101	$2^2 + 2^0 = 5$	$2^2 + 2^0 = 5$
0x8	1000	$2^3 = 8$	$-2^3 = -8$
0xD	1101	$2^3 + 2^2 + 2^0 = 13$	$-2^3 + 2^2 + 2^0 = -3$
0xF	1111	$2^3 + 2^2 + 2^1 + 2^0 = 15$	$-2^3 + 2^2 + 2^1 + 2^0 = -1$

4.

Dec	Bin	Hex	SignedToUnsigned
-8	1000	0x8	8
-3	1101	0xD	13
-2	1110	0xE	14
-1	1111	0xF	15
0	0000	0x0	0
5	0101	0x5	5

5. A. 440  
B. 20  
C. -424  
D. -396  
E. 68  
F. -312  
G. 16  
H. 12  
I. -276  
J. 32

- Welcome: Sean

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