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CS 10

Assignment 1B

Question 1

* 01001010
* 11010110
* 11001011
* 01010001

Question 2

* -74
* -86
* 53
* -81

Question 3

* 10111000
* 10000000
* 00100010
* 11100111

Question 4

* 11010100

Question 5

* Assembly language is an ideal tool for writing embedded programs because of its economical use of memory. We need to learn about it because we are most likely to be asked to program things like telephones, automobile fuel and ignition system, air-conditioning control systems, security cameras, video cards, hard drives, printer, and more.
* Assembly language helps us understand the interaction between computer hardware, operating systems, and application programs. We can test and apply theoretical information both in computer architecture and operating systems courses.
* Learning about assembly language enables us to learn how to program and direct access to computer hardware. This is helpful for game consoles as it needs to execute really fast for games. The code can be hand optimized for speed. As a gamer myself, I believe this is really important. Not only for games but also for phones, machines, and many more that needs a fast reaction.

Question 6

* ¬(A ^ B)

| A | B | (A ^ B) | ¬(A ^ B) |
| --- | --- | --- | --- |
| T | T | T | F |
| T | F | F | T |
| F | T | F | T |
| F | F | F | T |

* **¬(A v ¬B)**

| A | B | ¬B | (A v ¬B) | ¬(A v ¬B) |
| --- | --- | --- | --- | --- |
| T | T | F | T | F |
| T | F | T | T | F |
| F | T | F | F | T |
| F | F | T | T | F |

Question 7

* 10100010
* 01101111