Name:	
Student ID:	

Quiz 1 is going to test your knowledge on number representation and operations. This quiz is closed notes, internet, smart device, books, and other people. This class has limited space and you may be sitting closely next to someone. Pease refrain from looking at someone else's quiz. Doing so will result in **ZERO** for the quiz. The next time will result in being reported to the Department.

For each question *MAKE SURE YOU PUT YOUR ANSER IN THE PROVIDED BOX*. Failure to do so could result in points losing point for that question. ***YOU HAVE BEEN WANRED!!!!***

If you have any questions, please raise your hand and I will come to you. If I cannot reach you, I may ask for you to just say it out loud.

Number Conversions

1. Convert **-2** to **8-bit** Two's Compliment binary

Answer:	

2. Convert **2165** to unsigned **16-bit** hexadecimal

Answer:	

3. Convert Two's Compliment binary **1010 1110** to decimal

Answer:	

4. Convert the unsigned **16-bit** hexadecimal value **0x4564** to decimal

Answer:	

5. Convert the Two's Compliment binary number to decimal, **0111 1011**

Answer:	

Number Operations Subtract and Addition

1. Add the unsigned binary numbers **0000 0001** and **1111 1111**.

Answer:	

2. Subtract the unsigned binary numbers **10101010** from **11111101**.

Answer:	

3. Add the two's complement binary numbers **1011 1001** and **1111 0000**.

Answer:	

4. Subtract the two's complement binary numbers **11111111** from **0111 1110.**

Answer:	

5. Subtract the two's complement hexadecimal numbers **0x713F** from **0xC09E**.

Answer:	

Extra Credit:

What are **two** advantages for using Two's compliment over One's complement to represent signed numbers in hardware? Please make sure your answer is concise. Listing a bunch of reasons will result in no points.

Answer:	