Sam Myers
HW3

1. $91_{10} + C6_{16}$
$1011011_2 + 11000110_2$

```
 01011011   (unsigned 8-bit integers)
+11000110
----------
100100001 -> 289
```

2. $11_8 - 11_{10}$
$001001_2 - 01011_2$
$01001_2 + 10101_2$

```
 01001   (5-bit two's complement integers)
+10101
-------
 11110 -> -2
```

3. $12.3125_{10} + 0110_{I2Q2}$
$11000101_{I4Q4} + 0110_{I2Q2}$

```
 11000101   (unsigned integers, I4Q4)
+00011000
---------
 11011101 -> 13.8125
```

5. $9_{10} \cdot 3_{10}$
$1001_2 \cdot 11_2$

```
  1001   (unsigned integers)
x   11
------
  1001
 10010
------
 11011 -> 27
```

6. $(-5)_{10} \cdot (-6)_{16}$
$-(0101)_2 \cdot -(0110)_2$
$1011_2 \cdot 1010_2$

```
    1011   (4-bit two's complement integers)
  x 1010
--------
    0000
   1011
  0000
 1011
--------
 01101110 -> 30
```
(8-bit two's complement integer)

7. $9.5_{10} \cdot 2.625_{10}$
$10011_{I4Q1} \cdot 10101_{I2Q3}$

```
  10011   (unsigned integers)
x 10101
-------
  10011
 100110
10011000
-------
0111000.1111 -> 24.9375
```
(I6Q4)