

# 20 JUN Assignment

Q-4

1) 123

0	0	0	0	0	0	0	0	0
$2^8$	$2^7$	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
1	1	1	1	0	1	1		

Binary = (1111011)

$$\begin{array}{r}
 123 \\
 - 64 \\
 \hline
 59 \\
 - 32 \\
 \hline
 27 \\
 - 16 \\
 \hline
 11 \\
 - 8 \\
 \hline
 3
 \end{array}$$

2) 74

128	64	32	16	8	4	2	1
0	0	0	0	0	0	0	0
		1	0	0	1	0	10

$$\begin{array}{r}
 74 \\
 - 64 \\
 \hline
 10 \\
 - 8 \\
 \hline
 2 \\
 - 2 \\
 \hline
 0
 \end{array}$$

3. -60

	$2^{11}$	$2^{10}$	$2^9$	$2^8$	$2^7$	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
	128	64	32	16	8	4	2	1				
	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	1	1	1	0	0
1's comp	1	1	1	1	1	1	1	0	0	0	0	1
Add +								1	1	1		
	1	1	1	1	1	1	1	0	0	0	1	0

$$\begin{array}{r}
 60 \\
 - 32 \\
 \hline
 28 \\
 - 16 \\
 \hline
 12 \\
 - 8 \\
 \hline
 4 \\
 - 4 \\
 \hline
 0
 \end{array}$$

Binary of 60 is (111111111000100)

4. -11

Binary 12	0	0	0	0	0	0	0	0	0	0	0	0
1's	1	1	1	1	1	1	1	1	1	1	1	1
Add +												
	1	1	1	1	1	1	1	1	1	1	1	1

Binary -11 = (1111111110101)