Tutorial 5 - Answers

Sample Code	WREG	i	Z bit	DC bit	C bit
1. movlw b ’1000 0000’ addlw b ‘1000 0000’	0000 0000	N/A	1	0	1
2. movlw b ‘1011 1000’ addlw b ‘0100 0111’	1111 1111	N/A	0	1	0
3. movlw b ’0000 1000’ addlw b ‘1000 1100’	1001 0100	N/A	0	1	1
4. movlw b ‘1111 1111’ sublw b ‘1111 1111’	0000 0000	N/A	1	1	1
5. movlw b ‘1111 1111’ andlw b ‘1111 0000’	1111 0000	N/A	0	0	0
6. movlw b ‘1111 1111’ xorlw b 1111 0000’	0000 1111	N/A	0	0	0
7. movlw b ‘1111 1111’ iorlw b ‘1111 0000’	1111 1111	N/A	0	0	0
8. movlw b ‘1111 1111’ movwf i comf i, w	0000 0000	1111 1111	1	0	0
9. movlw b ‘1000 0000’ movwf i rlf i,w	0000 0000	1000 0000	1	0	0
10. movlw b ‘0000 0001’ movwf i decf i, f	0000 0001	0000 0000	1	0	0

Conclusions:

1. List the instructions in the instruction set that affect the status of the DC bit?

2, 3, 4 affected the DC bit.

2. List the instructions in the instruction set which affect the status of the C bit?

1, 3, 4 affected the C bit, as there was a carry over.

Q: How does the DC and C bit work?

Q: Do they change when the arithmetic or logic result change the previous value of the WREG? Or do they change when the value is 1?