Lab01\_XIAQIN\_QIU

1. a)Signed-magnitude: 110111=-10111=-23; +23=010111;

b)1's Comp: 110111=-001000=-8; +8=001000;

c)2's Comp: 110111=-001001=-9; +9=001001;

2. 0=000000 in all 3 systems;

-0=100000 in Signed-magnitude;

-0=111111 in 1's Comp;

no -0 in 2's Comp;

3. Signed-magnitude: 111111=-31;

1's Comp: 100000=-31;

2's Comp: 100000=-32;

4. Signed-magnitude: -(-31)=+31=011111; not overflow;

1's Comp: -(-31)=+31=011111; not overflow;

2's Comp: -(-32)=+32=111111=-000001=-1; overflow;

5. 111011+001110=001001;

6. 001001=+9;

7. in 2's Comp: 111011=-000101=-5;

8. in 2's Comp: 001110=+14;

9. 12+18=30 is 001100+010010=011110=30;

10. 13-30=-17 is 001101-011110=001101+(-011110)=001101+100010=101111=-(010001)=-17;

11. -25-7=-32 is -011001-000111=(-011001)+(-000111)=100111+111001=100000=-32;

12. 24+10 is 011000+001010=100010=-(011110)=-30 overflow;