

PROBLEM 1

1. `int x= 2018113012 % 100;`

`x=12`

2. `int a= -1 *x;`

`a=-12`

3. `unsigned int b= (unsigned int) a;`

It has a negative overflow, hence the unsigned value would be $-12 + (2^{32})$ which is 4294967296. Hence answer = 4294967284

4. `unsigned int c= UINT_MAX - x;`

UINT_MAX is $(2^{32}-1)=4294967295$

Hence answer is 4294967283

5. `int d=(int)c;`

There is a positive overflow, hence 2^{32} is subtracted from c
Answer is -13

6. `int p= 65490 + x;`

`p=65490 + 12=65502`

7. `short int e= (short int) p;`

There is a positive overflow hence we subtract $2^{16} = 65536$ from p
Answer is -34

8. `unsigned short f = (unsigned short) a;`

There is a negative overflow hence we add $2^{16} = 65536$ to a
Answer is $-12 + 65536 = 65524$

9. `printf("%d %u %u %d %h i %hu\n", a , b , c , d , e , f);`

-12 4294967284 4294967283 -13 -34 65524