(c)

```
 11001101          110>101   q1=1;subtract
-101
 ------
   010             010<101   q2=0;do not subtract
  -101
  ----
   101             101≥101   q3=1
  -101
  ----
   001             001<101   q4=0
  -101
  ----
   010             010<101   q5=0
  -101
  ----
   101             101<101   q6=1
  -101
  ----
     0   <--remainder
101001   <--quotient
```

(d)

```
    11010
   x11001
   -----
    11010
   00000
  00000
 11010
+ 11010
----------
1010001010
```

1.12 (a) two's complement

```
1011010
- 10101
```

2's complement
1011010
1101011
11000101
= 1000101

```
  10101
-1011010
```

```
 0010101
+0100110
 -------
 0111011   =-(1000101)
```

(b) one's complement

```
1011010
- 10101
```

1's complement
1011010
+1101010
11000100
+ 1
1000101 =(1000101)

```
  10101
-1011010
```

```
 0010101
+0100101
 -------
 0111010   =-(1000101)
```


1.13 (a) nine's complement

	9's complement
1875	1875
-924	+9075
	10950
	+ 1
	0951 =951
924	0924
-1875	+8124
	9048 =-(951)

(b) ten's complement

	10's complement
1875	1875
-924	+9076
	10951 =951
924	0924
-1875	+8125
	9049 =-(951)

1.14 (a)

```
 113          0 1110001
 -87        +1 0101001
            ----------
            10 0011010   =+(0011010)2
```

(b)

```
  87          0 1010111
-113        +1 0001111
            ----------
             1 1100110   =-(0011010)2
```

(c)

```
  43          0 0101011
 +26        +0 0011010
            ----------
             0 1000101   =+(1000101)2
```

(d)

```
  96          0,1100000
 -22        +1 1101010
            ----------
            10 1001010   =+(1001010)2
```

(e)

```
  46          0 0101110
 -77        +1 0110011
            ----------
             1 1100001   =-(0011111)2
```

1.15 (a)

```
  7256
x  23
 26012 <--P1
16534  <--P2
213352
```

scratch pad	octal
6x3=	22
5x3=	17
2x3=	6
7x3=	25
	26012 <-- P1
6x2=	14
5x2=	12
2x2=	4
7x2=	16
	16534 <--P2