第一章布置习题参考解

1-3

Dec	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Bin	10000	10001	10010	10011	10100	10101	10110	10111	11000	11001	11010	11011	11100	11101	11110	11111
Oct	20	21	22	23	24	25	26	27	30	31	32	33	34	35	36	37
Hex	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

1-9

Decimal	**Binary**	**Octal**	**Hexadecimal**
369.3125	**101110001.0101**	**561.24**	**171.5**
189.625	**10111101.101**	**275.5**	**BD.A**
214.625	**11010110.101**	**326.5**	**D6.A**
62407.625	**1111001111000111.101**	**171707.5**	**F3C7.A**

1-12

a)

```
      1 0 1 0
    × 1 1 0 0
    ---------
      0 0 0 0
    0 0 0 0
  1 0 1 0
+ 1 0 1 0
---------
1 1 1 1 0 0 0
```

b)

```
      0 1 1 0
    × 1 0 0 1
    ---------
      0 1 1 0
    0 0 0 0
  0 0 0 0
+ 0 1 1 0
---------
  1 1 0 1 1 0
```

c)

```
        1 1 1 1 0 0 1
      × 0 1 1 1 0 1
      -------------
        1 1 1 1 0 0 1
      0 0 0 0 0 0 0
    1 1 1 1 0 0 1
  1 1 1 1 0 0 1
+ 1 1 1 1 0 0 1
-------------
1 1 0 1 1 0 1 1 0 1 0 1
```

1-13

```
              0 0 1 0 0 0 1
          ---------------
1 0 1   ) 1 0 1 0 1 1 0
          1 0 1
          -----
          0 0 0 0 1 1 0
                  1 0 1
                  -----
                  0 0 1
```

1-16

a)

$(BEE)r = (2699)_{10}$

$11\times r^2+14\times r^1+14\times r^0=2699$

$11\times r^2+14\times r -2685=0$

解二次方程得：: $r = 15$ or $r \approx -16.27$

取： $r = 15$

b)

$(365)r = (194)_{10}$

$3\times r^2+6\times r^1+5\times r^0=194$

$3\times r^2+6\times r-189=0$

解二次方程得： $= -9$ or $r=7$

取：r = 7

1-18

a) $(0100\ 1000\ 0110\ 0111)_{BCD} = (4867)_{10}$

$= (1001100000011)_2$

b) $(0011\ 0111\ 1000.0111\ 0101)_{BCD} = (378.75)_{10}$

= (101111010.11)2

1-19

$(715)_{10}=(0111\ 0001\ 0101)_{BCD}$

$(354)_{10}=(0011\ 0101\ 0100)_{BCD}$

1-28

Gray Code for Hexadecimal Digits

Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Gray	0000	0001	0011	0010	0110	0111	0101	0100	1100	1101	1111	1110	1010	1011	1001	1000