Sa | Su | Mo | Tu | We | Th | Fr

Subject:
Year: Month: Date:

1) $(0.8542)_{10} = (?)_2$

$0.8542 \times 2 = \boxed{1}.7084$

$0.7084 \times 2 = \boxed{1}.4164$

$0.4164 \times 2 = \boxed{0}.8328$

$0.8328 \times 2 = \boxed{1}.6656$

$0.6656 \times 2 = \boxed{1}.3312 \quad \Rightarrow \boxed{(0.11011)_2}$

2)

a) $(65.47)_{16} = (?)_{10}$

$6 \times 16^1 + 5 \times 16^0 + 4 \times 16^{-1} + 7 \times 16^{-2} =$

$96 + 5 + 0.25 + 0.02 = \boxed{(101.27)_{10}}$

b) $(65.47)_{16} = (?)_2$

$(101.27)_{10} = (?)_2$

،عددی را که در قسمت a به دست آوردیم را،
به مبنای 2 می بریم.

$101 \div 2 = 50$, remainder (1)
$50 \div 2 = 25$, remainder (0)
$25 \div 2 = 12$, remainder (1)
$12 \div 2 = 6$, remainder (0)
$6 \div 2 = 3$, remainder (0)
$3 \div 2 = 1$, remainder (1)
$1 \div 2 = 0$, remainder (1)

$0.47 \times 2 = \boxed{0}.94$

$0.94 \times 2 = \boxed{1}.88$

$\boxed{(1100101.01)_2}$

3)

Sa Su Mo Tu We Th Fr

3)

a) 38

38 in BCD → 0011 1000 (3 8)

38 in Gray Code → 0011 1000 = 0010 1100 (3 8)

38 in gray ex-3 Code ⇒
- 0011 + 0011 = 0110
- 1000 + 0011 = 1011

⟹ 0110 1011 ⇒ gray ex-3 ⇒ **0101 1110**

b) 1952

1952 in BCD ⇒ 0001 1001 0101 0010 (1 9 5 2)

1952 in Gray Code → 0001 1001 0101 0010 → 0001 1101 0111 0011

1952 in gray ex-3 Code ⇒
- 0001 + 0011 = 0100
- 1001 + 0011 = 1100
- 0101 + 0011 = 1000
- 0010 + 0011 = 0101

⟹ 0100 1100 1000 0101

⇓ gray ex-3

0110 1010 1100 0111

99243022 معتز بابيلاني