S T Q Q S S D ___/___/___

1) a) $(1999)_{10} \,\lfloor 2$

(1) $999 \,\lfloor 2$

(1) $499 \,\lfloor 2$

(1) $249 \,\lfloor 2$

(1) $124 \,\lfloor 2$

(0) $62 \,\lfloor 2$

(0) $31 \,\lfloor 2$

(1) $15 \,\lfloor 2$

(1) $7 \,\lfloor 2$

(1) $3 \,\lfloor 2$

(1) (1)

R.: $(11111001111)_2$

$1024+512+256+128+64+8+4+2+1 = 1999$

b) $(1999)_{10} \,\lfloor 3$

(1) $666 \,\lfloor 3$

(0) $222 \,\lfloor 3$

(0) $74 \,\lfloor 3$

(2) $24 \,\lfloor 3$

(0) $8 \,\lfloor 3$

(2) (2)

R.: $(2202001)_3$

$1458+486+54+1 = 1999$

spiral

___/___/___

S T Q Q S S D

c) $(1999)_{10}$ ∟16 $\quad c = (12)_{10}$

19 $\quad$ 124 ∟16

12 $\quad$ 7 $\quad f = (15)_{10}$

R.: 7 12 15 ⇝ $(7cf)_{16}$ //

1,792 + 192 + 15 = 1999

d) $(1999)_{10}$ ∟62 $\quad w = 32$

15 ~~39~~ ~~(15)~~ 32

$f = 15$

R.: ~~15 32 ⇝ wf~~

32 15 ⇝ $(wf)_{62}$ //

1984 + 15 ⇝ 1999

2) $d^{k} + d^{k-1} + \dots + d^{0} = \dfrac{(d^{k+1}) - 1}{d-1}$ //

Ecemplo: p/ $d = 2$ e $K = 4$ ⇝ $1 + 2 + 4 + 8 + 16 = \dfrac{32-1}{1}$

31 $= 31$ //

ou

$d = 3$ e $K = 3$ ⇝ $1 + 3 + 9 + 27 = \dfrac{81-1}{2}$ ⇝ $40 = 40$ //

pois $S + (d-2)\cdot S + 1 = d^{\wedge}K$

spiral

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S T Q Q S S D

__/__/__

3) - Utilizar valores próximos

a) 1.70 $\quad 1\cdot2^0 + 1\cdot2^{-1} + 0\cdot2^{-2} + 1\cdot2^{-3} + 1\cdot2^{-4} + 0\cdot2^{-5} + 0\cdot2^{-6}$

$1 \quad 0.5 \quad 0 \quad 0.125 \quad 0.0625 \quad 0 \quad 0$

$1\cdot2^{-7} + 1\cdot2^{-8}$

$0.0078125 \quad 0.00390625$

R.: $(1.10110011)_2$

b) 1.70 $\quad 1\cdot3^0 + 2\cdot3^{-1} + 0\cdot3^{-2} + 0\cdot3^{-3} + 2\cdot3^{-4} + 2\cdot3^{-5}$

$1 \quad 0{,}66 \quad 0{,}024 \quad 0{,}008$

R.: $(1.20022)_3$

c) 1.70 $\quad 1\cdot16^0 + 11\cdot16^{-1} + 3\cdot16^{-2} + 3\cdot16^{-3}$

$1 \quad 0{,}6875 \quad 0{,}0039 \quad 0{,}00073$

R.: $(1.b33)_{16}$ $\qquad b = 11$

d) 1.70 $\quad 1\cdot62^0 + 43\cdot62^{-1}$

$1 \quad \cancel{0{,}06}\, 0{,}693...$

R.: $(1.H)_{62}$ $\qquad H = 43$

spiral

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__/__/__

S T Q Q S S D

4) a) Os esquemas de representação são muito úteis para realizar a inversão dos números, demonstrando uso para o computador.

b) 42) $(42)_{10} = 00101010$

cd1 → 11010101

$\underline{\quad\quad\quad\quad 1}$ cde 2

11010110

Bitwise and: 2.

1) $(1)_{10} = (00000001)_2$

cd1 → 11111110

cde2 → $\underline{\quad\quad\quad 1}$

11111111

Bitwise and: 1

96) $(96)_{10} = 01100000$

cd1 → 10011111

cde2 → $\underline{\quad\quad\quad 1}$

10100000

Bitwise and: 32

spiral

Scanned by CamScanner

S T Q Q S S D __/__/__

80) $(80)_{10} = (01010000)_2$

c de 1 → 10101111

c de 2 → $\begin{array}{r} 10101111 \\ +\quad 1 \\ \hline 10110000 \end{array}$

Bitwise and: 16.

- Percebi que a operação E Bit a Bit se utiliza do primeiro bit significativo do complemento de 2 para o resultado.

5) #include <stdio.h>

```
int main(void){

    int n,p,k,num,h;

    scanf("%d %d %d", &n,&p,&k);

    h=n>>(p-1);

    n=h>>k;

    num=n&h;

    printf("%d\n", num);

    return 0;
}
```