

Exercice note

#6

$p = \text{montant du prêt} = 200\,000 \$$

$n = \text{nb mois} = 360$

$t = \text{taux d'intérêt} = 5.5 \%$

$m = ?$

$$Z = \frac{t}{12 \cdot 100}$$

$$Y = 1 + Z$$

$$X = \text{Math.pow}(Y, n)$$

$$W = X - 1$$

$$m = \frac{(p \cdot X) \cdot Z}{W}$$

voir exercice envoyé

print(m)

#1 a)

$$\begin{array}{ccccc} \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 7^4 & 7^3 & 7^2 & 7^1 & 7^0 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 4 & 3 & 2 & 1 & 0 \end{array}$$

b) $2AA3_{16} \rightarrow \text{decimal?}$

$$\begin{aligned} &= 2 \cdot 16^3 + 10 \cdot 16^2 + 10 \cdot 16^1 + 3 \cdot 16^0 \\ &= 10915 \end{aligned}$$

c) 1) $4B_{16} \rightarrow \text{decimal?}$

$$= 4 \cdot 16^{(1)} + 11 \cdot 16^0 = 75_{10}$$

2) $4B_{16} \rightarrow \text{binary?}$

$$75_{10} = 2^6 + 2^3 + 2^1 + 2^0 = 1001011_2$$

64

11

- 8

3

- 2

1

3) $4B_{16} \rightarrow \text{octal}$

$$75 \mid 8$$

$$-72 \quad 9 \mid 8$$

$$3 \quad -8 \quad 1 \mid 8$$

$$1 \quad -0 \quad 0$$

$$113_8$$

Hilroy

$$\begin{array}{r}
 1011 \quad 116 \\
 - 96 \quad 63 \quad 116 \\
 \hline
 51 \quad -48 \quad 3 \quad 116 \\
 - 48 \quad 15 \quad -0 \quad 0 \\
 \hline
 3 \quad 3 \quad 0 \quad 0 \rightarrow \boxed{= 3F3_{16}}
 \end{array}$$

c) OK ee = ?

$$14 \cdot 16^1 + 14 \cdot 16^0 = 238$$

#2 $17_{10} \rightarrow \text{binare? sur 5 bits}$
 $2^4 + 2^0 = \boxed{10001}$

#3 a) 01101 C.ă. 2 sur 5 bits

$$2^3 + 2^2 + 2^0 = 8 + 4 + 1 = 13$$

b) $\overset{\ominus}{10011}$

C.ă. 1
 \downarrow
 01100

C.ă. 2 $\underline{\quad 1 \quad}$

01101 $\rightarrow 10?$

$$\rightarrow -(2^3 + 2^2 + 2^0) = -(8 + 4 + 1) = \boxed{-13}$$

#4 $\begin{array}{|c|c|c|} \hline 16 \text{ bit} & 11 \text{ bit} & 52 \text{ bit} \\ \hline s & e & f \\ \hline \end{array}$

a) 3,15 i) $3 \rightarrow 11$

$$0,15 \times 2 = \boxed{0},3$$

$$0,3 \times 2 = \boxed{0},6$$

$$0,6 \times 2 = \boxed{1},2$$

$$0,2 \times 2 = \boxed{0},4$$

$$0,4 \times 2 = \boxed{0},8$$

$$0,8 \times 2 = \boxed{1},6$$

$$0,6 \times 2 = \boxed{1},2$$

$$0,15 \rightarrow 00100110 \dots$$

$$11.0010011001$$

$$2) 1.10010011001 \times 10^1$$

$$3) e' = 1 \quad e = 1023 + 1 = 1024$$

$$1024 = 2^{10} \rightarrow 1000000000$$

$$4) 010000000000100100110011001 \dots 100$$

$$b) -4 \quad 1) 4_{10} \rightarrow 100_2$$

$$2) 1.00 \times 10^{-2}$$

$$3) e_1 = 2 \quad e = 1023 + 2 = 1025_{10}$$

$$4) \boxed{\overset{s}{\uparrow} \left[\overset{e}{\uparrow} \left[10000000000 \right] \overset{f}{\uparrow} 0000000000 \dots 000 \right]} \quad \rightarrow 1000000000001$$

$$\#5 \quad 10 \quad 2 \quad 3 \quad 4 \quad + \quad - \quad * \quad = 9$$

$$10 + 4 = 14 - 2 \cdot 3 = 9$$

$$\boxed{10 + 4 - 2 \cdot 3 = 9}$$