Maths Eggenberg

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Méthode de la soustraction

1. $(78)_{10} = 64 + (78 - 64) = 64 + 8 + 6 = 64 + 8 + 4 + 2 = 2^6 + 2^3 + 2^2 + 2^1 = (1001110)_2$

2. $(7904)_{10} = 2 * 60^2 + 11 * 60^1 + 44 * 60^0 = (021144)_{60}$

Méthode de la division

1. $7904/60 = 131\ r\ 44$
   $131/60 = 2\ r\ 11$
   $2/60 = 0\ r\ 2$
   $(7904)_{10} = (021144)_{60}$

Exercice

$(07211403)_{23} = 7 * 23^3 + 21 * 23^2 + 13 * 23 + 3 = (96'603)_{10} = (03071607)_{31}$

Binaire à virgule

Que vaut $(13.625)_{10} = (?)_2$

Methode 1

$\rightarrow 8 + 4 + 1 + \frac{1}{2} + \frac{0}{4} + \frac{1}{8} = (1101, 101)_2$

Methode 2

$\frac{2*0.625}{2} = \frac{1.25}{2} = \frac{1}{2} + \frac{0.25}{2}$
$\frac{0.25}{2} = \frac{0.5}{4} = \frac{0}{4} + \frac{0.5}{4}$
$\frac{0.5}{4} = \frac{1}{8} + 0$

Quand on a 1 au dessus de la fraction $\rightarrow$ ajoute 1 dans le binaire