Assignments for Computer Architecture

Book 1

YEAR 1

Question 1

1.   13 (decimal) $\rightarrow$ Binnary

13		6	1
		3	0
		1	1
		0	1

1 1 0 1

2.   1 0 0 10

$\rightarrow$ $2^1 + 2^4$

$\rightarrow$ $2 + 16$

$\rightarrow$ **18**

3. $1 + 2 + 4 + 8 + 16 + 32 + 64$

$\rightarrow$ **127**

4.

     1 0 1 0

+   0 1 1 0

1 0 0 0 0

1. 14356_{10} as   a   signed 16 bit number

$2^{10} = 1024 < 14356$

$2^{11} = 2048 < 14356$

$2^{12} = 4096 < 14356$

$2^{13} = 8192 < 14356$

$2^{14} = 16384 > 14356$

$(14356)_{10} = 0011\ 1000$