

Q1 a)

2	2	5	-1
2	1	2	-0
2	6	-0	
2	3	-1	
2	1	-1	
	0		

= 11001

b

2	47	-1
2	23	-1
2	11	-1
2	5	-1
2	2	-0
	1	-1

= 101111

Q2 a)

1	0	0	1	0	1	
						$\rightarrow 1 \times 2^0 = 1 \times 1 = 1$
						$\rightarrow 0 \times 2^1 = 0 \times 2 = 0$
						$\rightarrow 1 \times 2^2 = 1 \times 4 = 4$
						$\rightarrow 0 \times 2^3 = 0 \times 8 = 0$
						$\rightarrow 0 \times 2^4 = 0 \times 16 = 0$
						$\rightarrow 1 \times 2^5 = 1 \times 32 = 32$

$1 + 0 + 4 + 0 + 0 + 32 = 37$



b

$$\begin{array}{l} 11001 \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ \rightarrow 1 \times 2^0 = 1 \times 1 = 1 \\ \rightarrow 0 \times 2^1 = 0 \times 2 = 0 \\ \rightarrow 0 \times 2^2 = 0 \times 4 = 0 \\ \rightarrow 1 \times 2^3 = 1 \times 8 = 8 \\ \rightarrow 1 \times 2^4 = 1 \times 16 = 16 \end{array}$$

$$16 + 8 + 0 + 0 + 1 = 25.$$

~~$$\frac{3}{4} + \frac{2}{4}$$~~