

1) Convert 57

$$\begin{array}{r} 57 \\ - 32 \\ \hline 25 \\ - 16 \\ \hline 09 \\ - 8 \\ \hline 1 \\ - 1 \\ \hline 0 \end{array}$$

A = 57

128	64	32	16	8	4	2	1
0	0	1	1	1	0	0	1
				3			
				9			

Binary = 00111001  
hex = 39

$$\begin{array}{r} 123 \\ - 64 \\ \hline 59 \\ - 32 \\ \hline 27 \\ - 16 \\ \hline 11 \\ - 8 \\ \hline 3 \\ - 2 \\ \hline 1 \\ - 1 \\ \hline 0 \end{array}$$

b = 23

128	64	32	16	8	4	2	1
0	1	1	1	1	0	1	1
				7			
				b			

Binary = 01111011  
hex = 7b

$$\begin{array}{r}
 2) \quad \cancel{0011001} \quad \cancel{00} \\
 \underline{0111011} \\
 00111001 \\
 \underline{0111011} \\
 00111001
 \end{array}$$

$$a \vee b = 01111011$$

$$\begin{array}{r}
 00111001 \\
 \underline{01111011} \\
 00111001
 \end{array}$$

$$a \wedge b = 00111001$$

$$\begin{array}{r}
 00111001 \\
 \underline{01111011} \\
 01000010
 \end{array}$$

$$a \wedge b = 01000010$$

$$\begin{array}{ccccccc}
 0 & 1 & 0 & 1 & 0 & 1 & 0 \\
 0 & 1 & 1 & 1 & 0 & 1 & 1 \\
 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1
 \end{array}$$

$$a \vee b = 64 + 32 + 16 + 8 + 2 + 1$$

$$\begin{array}{l}
 \rightarrow \text{binary} = 123 \\
 \text{hex} = 7b
 \end{array}$$

$$\begin{array}{l}
 a \wedge b = \text{hex} = 39 \\
 \text{binary} = 32 + 16 + 8 + 1 = 57
 \end{array}$$

$$3) a \wedge b = \boxed{\text{hex} = 42}$$

128	64	32	16	8	4	2	1
0	1	0	0	0	0	1	0

4
2

$$\boxed{\text{decimal} = 66}$$

4)  $a = 57$   
 $b = 123$   
 $c = a | b$   
 $d = a \& b$   
 $e = a \wedge b$

Print "%08b %02x %d\n" %

[c, c, c]

~~Print~~ format\_string = "%08b %02x %d\n" % [c, c, c]  
 Print format\_string % [c, c, c]  
 Print format\_string % [d, d, d]

5) 1) sally

Id = 38 17

quiz answer = 20

0 = F       $\begin{array}{cc} 2 & 0 \\ 0010 & 0 \end{array} \mid \begin{array}{c} 000 \\ \text{padding} \end{array}$

T = T      quiz answers = F F T F F

2) name = patrick

Id = 50 19  $\rightarrow$  50 19

quiz answer: 68

$\begin{array}{cc} 6 & 8 \\ 00110 & 10000000 \end{array}$

quiz answers = F T T F T

3) name = chloe

Id = 49 23  $\rightarrow$  49 23

quiz answer: 68

$\begin{array}{cc} 6 & 8 \\ 0110 & 10000000 \end{array}$

quiz answers = F T T F T

4) name = Brandon  
id = 88 15  $\rightarrow$  8815

quiz ~~8~~ answers = e 8

$\underbrace{1110}_e$        $\underbrace{1000}_{8} | 000$

quiz answers = TTT FT

5) name = Kimberly  
id = 22 10  $\rightarrow$  2210

quiz answers = 28

$\underbrace{0010}_2$        $\underbrace{1000}_{8} | 000$

quiz answers = FFTFT