

Discussion [0b10] [2] [0x2]

Limits

(a) What is the biggest number that can be represented with two decimal digits?

(b) What is the biggest number that can be represented with three binary digits?

(c) What is the biggest number that can be represented with four hexadecimal digits?

Conversion

(a) Convert the following binary numbers into decimal.

11001 -> _____

1001001 -> _____

(b) Convert the following decimal numbers into binary.

12 -> _____

64 -> _____

127 -> _____

(c) Convert the following binary numbers into hexadecimal.

10011001 -> _____

11110111 -> _____

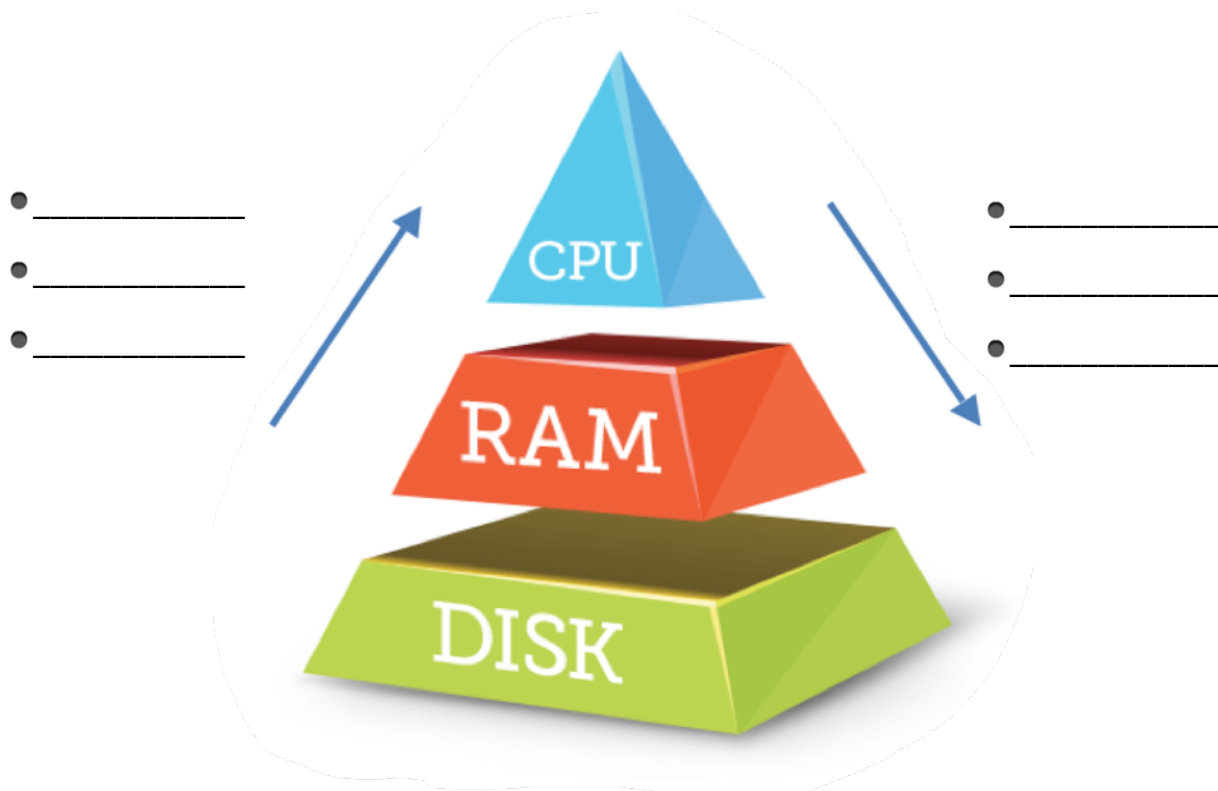
11000000111111111101110 -> _____

(d) Fill in the blanks.

Decimal	Binary	Hexadecimal
12		C
5		5
11	1011	
25	11001	
	10001	11
	11011	1B
8		
	1110	
		1E
		49

Memory Hierarchy

(a) Fill in the trends (size, cost, speed).



Reference Hex <—> Bin

BIN	HEX
0000	0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F