

Reading list:**Chapter 3, 4.1-4.4; 7.4 (579-585), 8.3 (646-651), Appendix A**

1. Complete the following table of equivalent values. If a value cannot be represented in a format, write a NA in that cell.

2's complement	Decimal	sign magnitude
00011101000		
111001011111		
11110.0011001		
	-3333	

2. Write the routine BMOVE a function of three arguments. \$A0 contains the start address of a destination buffer, \$A1, contains the start address of the source buffer, and \$A2 contains the number of bytes to move. BMOVE copies the specified number of bytes from the source to the destination. However instead of implementing BMOVE as a byte by byte copy, you have to improve performance by using LW and SW instead of LB and SB whenever possible.
3. What is the average time to read or write a 2048 byte block for a disk rotating at 10000 RPM. Use 5ms as the seek time, 9 MB/sec as the transfer time and a controller overhead of 1 ms?
4. Write the assembly language stub to allocate space on the stack for a integer array with 100 elements, each of which has the initial value of -1.
5. Assume we have a page size of 1024 bytes. What is the page number and offset for the following:
- (a) 899 (decimal)
 - (b) 0x3f244 (hex)
 - (c) 0x0017c (hex)
6. Use the following (hex): \$T0 = FA, \$T1 = 33, \$T2 = 33333333, \$T3=17777777 as initial starting conditions, what is the value in \$T2 as a result of each of the following instructions:
- (a) and \$t2, \$t0, \$t1
 - (b) or \$t2, \$t2, \$t1
 - (c) srl \$t2, \$t3, 3