

Name: _____
 Value: 2

Complete the following table concerning the smallest and largest integers that can be represented in an 8-bit configuration assuming a sign magnitude storage mode.

Decimal (Base 10)		Binary (Base 2)	
Smallest	Largest	Smallest	Largest
#1	#2	#3	#4

Complete the following table concerning the smallest and largest integers that can be represented in a 4-bit configuration assuming a sign magnitude storage mode.

Decimal (Base 10)		Binary (Base 2)	
Smallest	Largest	Smallest	Largest
#5	#6	#7	#8

Complete the following table concerning the smallest and largest integers that can be represented in a 5-bit configuration assuming a sign magnitude storage mode.

Decimal (Base 10)		Binary (Base 2)	
Smallest	Largest	Smallest	Largest
#9	#10	#11	#12

For each of the decimal numbers in the table below, provide the internal representation of each. Assume a word size of 8 bits and a sign magnitude storage mode.

Decimal Number	Internal Representation	Decimal Number	Internal Representation
0	#13	-0	#14
125	#15	-125	#16
82	#17	-82	#18
1	#19	-1	#20
127	#21	-127	#22
255	#23	-255	#24

For each of the internal forms shown in the table below, provide the decimal (base 10) equivalent. Assume a word size of 8 bits and a sign magnitude storage mode.

Internal Representation	Decimal Number	Internal Representation	Decimal Number
0101 1001	#25	1010 0110	#26
1111 1111	#27	1000 0000	#28
0111 1111	#29	0000 0000	#30
1010 1010	#31	0101 0101	#32
0011 1100	#33	1100 0011	#34