#1. Show the representation of \(-512_{10}\) in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one’s-complement

c) two’s complement

#2. Convert \(459_{10}\) into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

#3. Fill in the CCR bits for the following addition instructions (8-bit two’s-complement numbers):

\[
\begin{array}{c}
10101110 \\
+ 11011001 \\
\hline
\end{array}
\quad
\begin{array}{c}
01101011 \\
+ 01010101 \\
\hline
\end{array}
\]

\[
\begin{array}{cccccccccc}
\text{N} & \text{Z} & \text{V} & \text{C} & \text{N} & \text{Z} & \text{V} & \text{C} \\
| & | & | & | & | & | & | \\
(over)
\end{array}
\]
#4. Powers of 2

\[ 128G = 2^{10} \]

\[ 2^{12} = \text{_____} \quad \text{(in terms of K, M, G, etc.)} \]

#5. List two examples of systems/programs/devices that use a Stack Architecture (as discussed in class):

1) 

2) 

The SPARC Architecture is an example of a __________________ architecture. The only group of instructions that touch memory are ___________ and ___________.
