#1. Show the representation of $-240_{10}$ in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one’s-complement

c) two’s complement

#2. Convert $321_{10}$ into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

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

\[
\begin{array}{cccc}
11110110 & + & 00001010 & \quad \text{(over)} \\
\hline
& & & \\
\end{array}
\]

\[
\begin{array}{cccc}
10101010 & + & 10011001 & \\
\hline
& & & \\
\end{array}
\]

\[
\begin{array}{cccc}
& | & | & | & \\
N & Z & V & C \\
\hline
& | | | | | \\
\end{array}
\]

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

\[ 16G = 2^{---} \]

\[ 2^{27} = ------- \text{ (in terms of K, M, G, etc.)} \]

#5. List the order of the stages of the compilation process discussed in class:

A - ld (Linkage Editor)
B - exe/a.out (executable image)
C - ccomp (C Compiler)
D - as (assembler)
E - cpp (C Preprocess)

\%

cc/gcc file.c --\[\] --\[\] --\[\] --\[\] --\[\] --\[\]