#1. Show the representation of $-239_{10}$ in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one’s-complement

c) two’s complement

#2. Convert $326_{10}$ into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

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

\[
\begin{array}{c}
10110110 \\
+ 10001010 \\
\hline
\end{array} \quad \begin{array}{c}
00101010 \\
+ 10011001 \\
\hline
\end{array}
\]

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

\[ 512K = 2^{\text{---}} \]

\[ 2^{32} = \text{_____} \] (in terms of K, M, G, etc.)

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

A - exe/a.out (Executable image)
B - ld (Linkage Editor)
C - as (Assembler)
D - ccomp (C Compiler)
E - cpp (C Preprocessor)

% cc/gcc file.c --> _____ --> _____ --> _____ --> _____ --> _____