#1. Show the binary representation of $-367_{10}$ in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one’s-complement

c) two’s complement

#2. Convert $434_{10}$ 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):

\[
\begin{array}{c}
10000000 \\
+ 10000000 \\
\hline
\end{array}
\quad \begin{array}{c}
01111111 \\
+ 01111111 \\
\hline
\end{array}
\]

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

(over)
#4. Powers of 2

\[ 64G = 2^{____} \]

\[ 2^{29} = ______ \] (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 - cpp (C Preprocessor)
C - exe/a.out (Executable image)
D - ccomp (C Compiler)
E - as (Assembler)

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