ECE 0142 Computer Organization
Homework 3
Assigned: 1/26/2016 Due: 1/29/2016 before class

1. Let $N_1 = 3.984375 \times 10^{-1}$; $N_2 = 3.4375 \times 10^{-1}$; $N_3 = 1.771 \times 10^3$

   Calculate $(N_1+N_2)+N_3$ and $N_1+(N_2+N_3)$ by hand, assuming each of the values are stored in the 16-bit half precision format described in exercise 3.27 on page 239 of your textbook. Compare the two results and draw a simple conclusion.
   Note that when making the intermediate floating-point result fit the 16-bit format, you may use one digit to round. For example: if there is only one significant digit, 0.1_2 will be rounded up to 1 and 0.01_2 will be rounded down to 0.

2. Refer page 26 of you slides on ALU, show how this logic was derived for the overflow bit generation in 2's complement representation.