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Homework 1, Spring 2019

1. (60 points total, 10 points each) Determine the result in both decimal and binary format and C and V flags of the following calculations for a 5-bit system using the C and V flag convention of an ARM processor:
 - a. $(-16) + (-16)$
 - b. $14 - (-16)$
 - c. $14 - 16$
 - d. $15 - (-6)$
 - e. $15 + (-6)$
 - f. $14 + (-16)$
2. (30 points total, 5 points each) Write the C code to perform the following operations assuming A is a `uint16_t` variable:
 - a. $A = 0xH_3H_2H_1H_0 \Rightarrow A = 0xH_3H_20H_0$
 - b. $A = 0xH_3H_2H_1H_0 \Rightarrow A = 0xH_3H_2FH_0$
 - c. $A = 0xH_3H_2H_1H_0 \Rightarrow A = 0xH_3H_26H_0$
 - d. $A = 0xH_3H_2H_1H_0 \Rightarrow A = 0xH_3H_29H_0$
 - e. $A = 0xH_3H_2H_1H_0 \Rightarrow A = 0xH_3H_2\bar{H}_1H_0$ where $0x\bar{H}_1 = 15 - 0xH_1$
 - f. $A = 0xH_3H_2H_1H_0 \Rightarrow A = 0x0H_3H_2H_1$

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