

Computer Science 0360 – 265 – 01 Assignment #1
Due date is Wednesday February 1th 2012
(submit to me in classroom)

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Clearly show the steps of your answer for each question below
(total is 50 points)

1. (10pts) Convert $(1G8A.23)_{17}$ into its equivalent in base 15.
2. Let $n = 6$ be the number of bits used to represent an integer.
 - (a) (4pts) What is the range of integers that can be represented in
 - UBI?
 - 1CF?
 - 2CF?
 - SMF?
 - (b) (8pts) Make a table that lists all negative numbers in 1CF, 2CF and SMF
3. Let $n = 8$ be the number of bits used to represent an integer.
 - (a) (12pts) Determine the 1CF, 2CF and SMF representations of
 - $(+35)_{10}$
 - $(-35)_{10}$
 - $(+123)_{10}$
 - $(-123)_{10}$
 - (b) (8pts) Perform the addition $(+131)_{10} + (-237)_{10}$ in
 - 1CF
 - 2CF
 - (c) (8pts) Perform the subtraction $(-131)_{10} - (-237)_{10}$ in
 - 1CF
 - 2CF