1. (12 points: 2 points each) Perform the following operations or conversions.

   (a) $0x503c - 0x40$ (result in hex): ________________________

   (b) Hex $0xbc06$ to binary: ____________________________

   (c) Decimal 53 to little-endian hex (show 4 bytes): ________________________

   (d) $01101001 \oplus 01010101$ (binary): ________________________

   (e) $01101001 \& 01010101$ (binary): ________________________

   (f) Decimal value of unsigned $0xFFFFFFFF$: ________________________

       (an expression is OK)

2. (2 points) Given a value x, show how to compute $41x$ using only shifts and adds (as few as possible).
3. (6 points total: 2 points each) Write a single C expressions (not a series of statements), in terms of the 32-bit variables \( x \) and \( y \), to compute a value that is:

(a) identical to \( x \), except that the most significant byte is set to \( 0xFF \):

(b) has as its least significant (LS) byte the LS byte of \( y \), but all other bytes are the corresponding bytes of \( x \):

(c) is the (bitwise) complement of the exclusive or of \( x \) with \( y \):