3-97 Perform the following subtractions by expanding the given hexadecimal notation to

 bits, negating the subtrahend, and then adding. The numbers are given as hexadecimal

 characters, but the bits represented by the characters are in the twos’ complement
 number system. Work the problems in 8-bit words and at the end, code it back into
 hexadecimal characters. Your answer should be hexadecimal codes in the twos’
 complement number system. For each case state if there is *overflow* or *no overflow*.

 Part (a) is done completely for you as an example.

 (a) $FE\_{2Chex}-0F\_{2Chex}= ?$

In decimal, this problem is

$$\left(-2\_{10}\right)-\left(15\_{10}\right)=-17\_{10}$$

 0000 11112C 🡨 the given subtrahend expanded to bits

 1111 00012C 🡨 negation of given subtrahend

 1 1110 0010 🡨 carries

 1111 11102C 🡨 given minuend

 1111 00012C 🡨 negation of given subtrahend

 1110 11112C 🡨 difference

 In hex code the difference is $EF\_{2Chex}$and there is **no overflow**

 (b) $FA\_{2Chex}-F1\_{2Chex}= ?$

 (c) $FE\_{2Chex}-FE\_{2Chex}= ?$

 (d) $5B\_{2Chex}-44\_{2Chex}= ?$