# Homework #0
# Answers

1.  F3A
    $\underline{19B_{16}}$
    10D5


2.  F3A
    $\underline{-19B_{16}}$
    D9F


3.  756
    $\underline{344_8}$
    1322


4.  756
    $\underline{-344_8}$
    412


5.  Convert $756_8$ to Base 16
    $756_8$ → $111\ 101\ 110_2$ → $0001\ 1110\ 1110_2$ → $1EE_{16}$


6.  Convert $344_8$ to Base 16
    $344_8$ → $011\ 100\ 100_2$ → $0000\ 1110\ 0100_2$ → $E4_{16}$


7.  Add the results of 5 & 6 above together in Base 16
    1EE
    $\underline{\ E4_{16}}$
    2D2


8.  Convert the answer for problem 3 above to Base 16
    $1322_8$ → $001\ 011\ 010\ 010_2$ → $0010\ 1101\ 0010_2$ → $2D2_{16}$

9. **Compare the answers in 7 & 8 above! If they don't agree, you made a mistake.**

10. **Convert $F3A_{16}$ to Base 8**
    $F3A_{16}$ → $1111\ 0011\ 1010_2$ → $111\ 100\ 111\ 010_2$ → $7472_8$

11. **Convert $19B_{16}$ to Base 8**
    $19B_{16}$ → $0001\ 1001\ 1011_2$ → $000\ 110\ 011\ 011_2$ → $633_8$

12. **Subtract the result in #11 above from the result in # 10 above in Base 8**
    7472
    <u>  $633_8$</u>
    6637

13. **Convert the result in # 2 above to Base 8. If they don't agree, you made mistake.**

    $D9F_{16}$ → $1101\ 1001\ 1111_2$ → $110\ 110\ 011\ 111_2$ → $6637_8$

14. **Convert $19B_{16}$ to Base 2**
    $19B_{16}$ → $000110011011_2$

15. **Convert $19B_{16}$ to Base 4**
    $19B_{16}$ → $00\ 01\ 10\ 01\ 10\ 11_2$ → $012123_4$