5) (10 pts) ALG (Base Conversion)

(a) (5 pts) Convert $FAD8_{16}$ to octal.

Convert to binary
1111 1010 1101 1000

Realign bits (implied leading zeros for single 1 at beginning)

001 111 101 011 011 000

Translate to octal

$1\ 7\ 5\ 3\ 3\ 0_{8}$

Grading: 2 pts converting bits to binary, 2 pts realigning bits, 1 pt converting to octal

(b) (5 pts) Convert 2120_{10} to hexadecimal.

16 | 2120
16 | 132 R 8
16 | 8 R 4
16 | 0 R 8

$8\ 4\ 8_{16}$

Grading: 1 pt for each quotient and remainder (except 0), if solved differently, grade accordingly.