Computer Science Exam, Part A

- 5) (10 pts) ALG (Base Conversion)
- (a) (5 pts) Convert FAD8₁₆ 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

1753308

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

(b) (5 pts) Convert 2120₁₀ to hexadecimal.

16 | 2120 16 | 132

R 8

16 | 8 R 4

16 | 0 R 8

 848_{16}

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