Quiz Set 2
For Quiz on Thursday, September 19

Work all of the following problems. A subset of the problems will be on Quiz 2 to be given September 19. Quizzes will be graded for correctness and clarity.

Unless otherwise stated, all problems can be found in the appropriate *Problems* section of the textbook (*Elementary Number Theory* by U. Dudley, 2nd Edition).

- Section 3 # 2, 6, 8

- Section 4 # 4, 9

- Find the last two digits of $85^{85} - 1$ without the use of a calculator.

- Graduate Students: Let a, b, c, n_1, n_2 be integers with $n_1, n_2 > 0$. If $a \equiv b \pmod{n_1}$ and $a \equiv c \pmod{n_2}$, prove that $b \equiv c \pmod{n}$, where the integer $n = (n_1, n_2)$.