

HOMEWORK 19
DISCRETE MATHEMATICS I
DUE 04-16 (UPDATED 04-11)

- (1) (a) Prove Theorem 3.5 on p. 74 for $n \geq 0$ by strong induction. (HINT: Your base cases will be $n = 0, \dots, d - 1$.)
- (b) Assuming that you already know Theorem 3.5 when $n \geq 0$, prove it for all integers n . (HINT: If n is a positive integer, how are the answers related when you divide $-n$ or n by d ?)
- **Four** book problems: #3.1.28, 29, 36, 37, 38.