Lecture 10

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This week is working more problems and proving some theorems. So I will give some hints that I usually give in class.

Exercise 4.11: Go by (strong) induction on n this time. It breaks into cases of whether n is composite or a power of a prime. I needed a second induction for a power of a prime.

Exercise 4.12: Notice that, if $c_i M_i \equiv 1 \mod m_i$, then $c_i M_i \equiv 0 \mod m_j$, $j \neq i$.

Problem 10: Make an argument as to why you can work mod 20 and then work mod 20.

Problem 11: Euclidean algorithm

I hope these hints help. Feel free to email me with questions.