Homework 12

1. **[modular arithmetic, 5 points] Please give two values of x that satisfy the equations x=4 (mod 5) and x=5 (mod 11)**

TODO

1. **[RSA foundation, 5 points] Consider an RSA key set with p=11, q =29. What is the smallest prime number for e?**

TODO

1. **[Cryptosystem foundation, 5 points] What is man-in-the-middle attack? Explain with your words or apply what we discussed in the pirate puzzle example.**

TODO

1. **[P, NP, NPC problems, 5 points] Explain the relationship of P-class problem and NP-class problem. And explain why 0/1 knapsack problem is an NP-hard problem.**

TODO