Attendance Quiz # 10 for Dr. Z.'s Number Theory Course for Oct. 7, 2013

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. Without actually solving, find out how many solutions there are in $\{0, 1, \ldots n-1\}$ where n is the modulo.

i. $21x \equiv 12 \pmod{33}$

ii. $5^{10}x \equiv 2^{10} \pmod{13^{30}}$

2.: Find, or explain why it does not exist $4^{-1} \pmod{21}$.