

## NUMBER THEORY: CLASS 16

### 1. EXERCISE

- 1) Solve the linear congruences using Euler's theorem  
 $5x \equiv 3 \pmod{14}$ .
- 2) a) Show 25 is a pseudoprime to the base 7.  
b) Also show 25 is a strong pseudoprime to the base 7.
- 3) Show the following are Carmichael number:
  - a)  $1105 = 5 \cdot 13 \cdot 17$
  - b)  $1729 = 7 \cdot 13 \cdot 19$
  - c)  $2645 = 5 \cdot 17 \cdot 29$ .