MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 3 - DECEMBER 2014
ROUND 2 ARITHMETIC/NUMBER THEORY

ANSWERS

A) _____

B) _____

C) _____

A) Compute the remainder when 6^{153} is divided by 7.

B) Find the <u>smallest</u> of four consecutive positive integers such that the first (smallest) is divisible by 5, the second by 4, the third by 3, and the fourth by 2.

C) What is the <u>second</u> <u>smallest</u> positive integer with exactly 15 positive factors?