

MASSACHUSETTS MATHEMATICS LEAGUE
DECEMBER 2004
ROUND 2 ELEMENTARY NUMBER THEORY

ANSWERS

A) _____

B) _____

C) _____

A) Three men who are no longer teenagers find the product of their current ages is 26,390.
Find the sum of their current ages.

B) How many positive integers less than 500 each have exactly three different positive integer divisors?

C) Find all primes of the form $8n^3 - 2197$