

**MASSACHUSETTS MATHEMATICS LEAGUE  
DECEMBER 2003  
ROUND 2: NUMBER THEORY**

**ANSWERS**

A) \_\_\_\_\_

B) \_\_\_\_\_

C) \_\_\_\_\_

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A) During rush hour on December fourth, 20% of the cars on Route 314 took exit 1, 25% of those remaining took exit 2, and 10% remaining after that took exit 3. If 162 cars continued on Route 314, how many cars traveled the route during rush hour that day?

B) A palindrome reads the same from right to left or vice versa. For example, 37673 is a palindrome. How many palindromes are there between 10,000 and 20,000?

C) The length of each side of a triangle is a prime, and its perimeter is also a prime. What is the smallest possible perimeter that the triangle could have?