

1. Write your solutions on separate pieces of paper.
2. Write your name, your address, name of your school, and the school teacher at the top of each piece of paper you turn in.
3. When solving a problem explain your solution (even if you can only explain part of it, or have only part of a solution). Answers without explanations will receive no credit.

## MANHATTAN MATHEMATICAL OLYMPIAD 2006

### Grades 5-6

1. Is it possible to place six points in the plane and connect them by non-intersecting segments so that each point will be connected with exactly
  - a) Three other points?
  - b) Four other points?
2. Martian bank notes can have denomination of 1, 3, 5, 25 marts. Is it possible to change a note of 25 marts to exactly 10 notes of smaller denomination?
3. What is bigger:  
 $99 \cdot 99 \cdot \dots \cdot 99$  (product of 20 factors) or  
 $9999 \cdot 9999 \cdot \dots \cdot 9999$  (product of 10 factors)?
4. How many whole numbers, from 1 to 2006, are divisible neither by 5 nor by 7?