注意：

允許學生個人、非營利性的圖書館或公立學校合理使用本基金會網站所提供之各項試題及其解答。**可直接下載而不須申請**。

重版、系統地複製或大量重製這些資料的任何部分，必須獲得財團法人臺北市九章數學教育基金會的授權許可。

申請此項授權請電郵 ccmp@seed.net.tw

Notice:

Individual students, nonprofit libraries, or schools are permitted to make fair use of the papers and its solutions. Republication, systematic copying, or multiple reproduction of any part of this material is permitted only under license from the Chiuchang Mathematics Foundation.

Requests for such permission should be made by e-mailing Mr. Wen-Hsien SUN ccmp@seed.net.tw

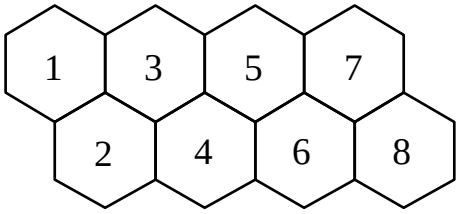
INTERNATIONAL MATHEMATICS AND SCIENCE OLYMPIAD FOR PRIMARY SCHOOLS (IMSO) 2007

Mathematics Contest in Taiwan, Exploration Problems

Name:_____ School:_____ Grade:_____ ID number:_____

Answer the following 5 questions. Write down your answer in the space provided after each question. Each question is worth 8 points. Time limit: 60 minutes.

1. How many different routes from cell 1 to cell *n* can you find if you always move to an adjacent cell labeled with a higher number?
   (a) 1 to 3 (1 point)
   (b) 1 to 6 (3 point)
   (c) 1 to 12 (4 point)

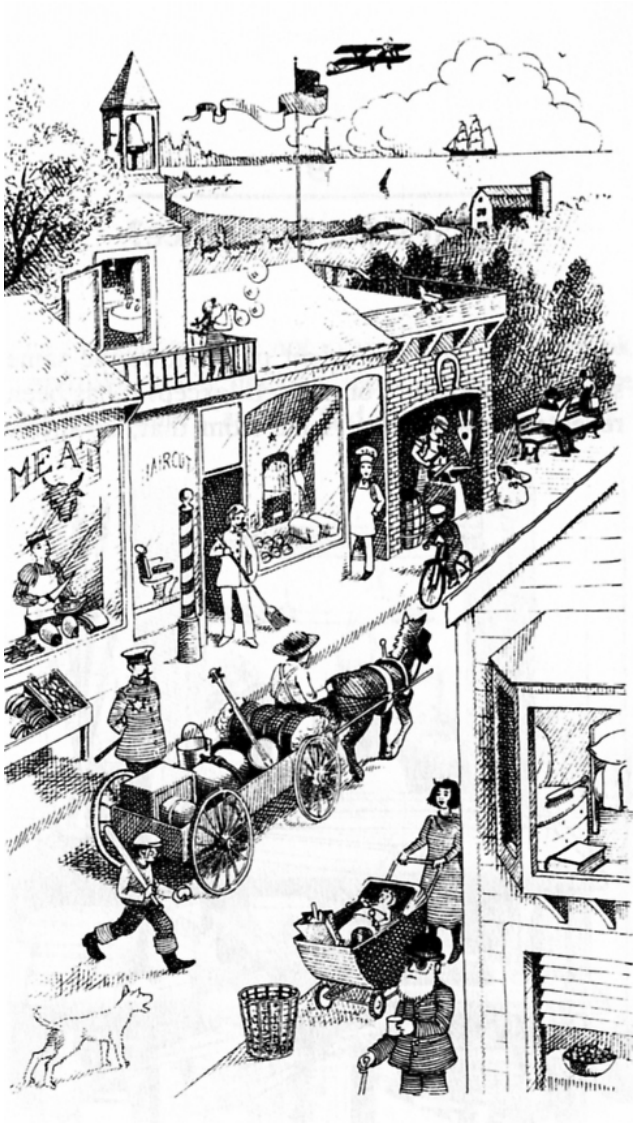


2. The number 21 can be expressed as a sum of two or more consecutive positive integers in 3 different ways, namely

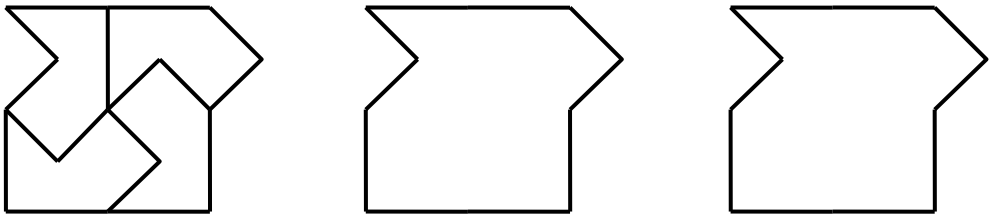
   10+11
   6+7+8
   1+2+3+4+5+6.

   How many different ways can (a)100 (3 point) ; (b)210 (5 point) be expressed as such sum in?

3. There are at least 89 things in the right picture with names that begin with the letter B. How many can you find? Write down 16 things.
(0.5 point each correct answer;
—0.5 point each incorrect answer.)



4. The figure on the left is divided into four congruent parts—four units of identical size and shape that can be laid flush on top of one another. Divide the figure on the right into five congruent parts (4 point), and then six (4 point).



5. In how many different ways can these nine barrels be arranged in three tiers of three so that :
(a) no barrel shall have a smaller number than its own below it? (3 point)
(b) no barrel shall have a smaller number than its own below it or to the right of it? (5 point)

