1995 FG7.2
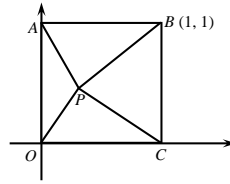
如圖，P 為正方形 $OABC$ 內的任意點，

且 b 為 $PO + PA + PB + PC$ 之最小值，求 b 的值。

Refer to the diagram, P is any point inside the square $OABC$

and b is the minimum value of $PO + PA + PB + PC$,

find the value of b.

1999 HI6

已知 a、b、c 是正整數，且滿足 $a < b < c = 100$，

求以 a cm、b cm、c cm 為邊長的三角形的個數。

Given that a, b, c are positive integers and $a < b < c = 100$,

find the number of triangles formed with sides equal a cm, b cm and c cm .

2001 FG3.3

$ABCD$ 是一圓內接四邊形。AC 和 BD 相交於 G。

已知 $AC = 16$ cm，$BC = CD = 8$ cm，$BG = x$ cm 和 $GD = y$ cm。

若 x 和 y 皆為整數且 $x + y = c$，求 c 的值。

$ABCD$ is a cyclic quadrilateral. AC and BD intersect at G.

Suppose $AC = 16$ cm, $BC = CD = 8$ cm, $BG = x$ cm and $GD = y$ cm.

If x and y are integers and $x + y = c$, find the value of c.

2003 HI10

一個三角形的三邊長分別是 7.5 cm、11 cm 和 x cm。

若 x 為整數，求 x 的最小值。

The sides of a triangle have lengths 7.5 cm, 11 cm and x cm respectively.

If x is an integer, find the minimum value of x .

2004 HG3

若最多有 k 個互不全等的等腰三角形，其周界為 25 cm 及其三邊的長度

以 cm 表示時均為正整數，求 k 的值。

If there are at most k mutually non-congruent isosceles triangles whose perimeter
is 25 cm and the lengths of the three sides are positive integers when expressed in
cm, find the value of k .

2009 FG1.1

已知三角形三邊的長度分別是 a cm、2 cm 及 b cm，其中 a 和 b 是整數且
$a \le 2 \le b$。若有 q 種不全等的三角形滿足上述條件，求 q 的值。

Given some triangles with side lengths a cm, 2 cm and b cm, where a and b are
integers and $a \le 2 \le b$. If there are q non-congruent classes of triangles satisfying
the above conditions, find the value of q .

2011 FIS.1

設 P 為邊長為整數小於或等於 9 的三角形的數目。求 P 的值。

Let P be the number of triangles whose side lengths are integers less than or equal
to 9. Find the value of P .

Answers

1995 FG7.2	1999 HI6	2001 FG3.3	2003 HI10	2004 HG3
$2\sqrt{2}$	2401	14	4	6
2009 FG1.1	2011 FIS.1			
3	95			