Area bounded by st. lines (HKMO Classified Questions by topics)

### 1990 FI3.3

以x軸,y軸及直綫 2x+y=8 所圍成的三角形的面積是c平方單位, 求c的值。

The area of the triangle formed by the x-axis, the y-axis and the line 2x + y = 8 is c sq. units. Find the value of c.

# 1994 FI5.3

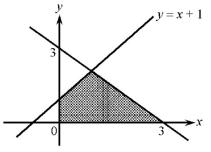
若一個由x 軸、y 軸及直綫 36x + 9y = 18 所圍成之三角形之面積為 C, 求 C的值。

If C is the area of the triangle formed by x-axis, y-axis and the line 36x + 9y = 18, find the value of C.

### 1996 FI4.1

圖中陰影部分面積是 a, 求 a 的值。

In the figure, the area of the shaded region is a. Find the value of a.



### 1997 FI5.3

一三角形是由 x-軸、y-軸和直綫 30x + 60y = 120 所組成。

若所包圍之三角形的面積為c,求c的值。

The triangle is formed by the x-axis and y-axis and the line 30x + 60y = 120. If the bounded area of the triangle is c, find the value of c.

# 1999 HG4

求直綫 x+4v-2=0 與兩條座標軸所圍成的三角形的面積。

Find the area enclosed by the straight line x + 4y - 2 = 0 and the two coordinate axes.

### 2001 HG7

求由 x-軸 及直綫  $x-3y=0 \cdot x+y-4=0$  圍出的面積。

Find the area enclosed by the x-axis and the straight lines x - 3y = 0, x + y - 4 = 0.

### 2002 HG3

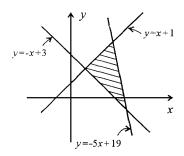
設在直角坐標平面上不等式  $|x|+|y|\leq 3$  圍出的多邊形內面積為 p,求 p 的數 在 $extbf{p}$ 標平面上,用以下直綫所圍成圖形的面積為 p 平方單位,求 p 的值。 值。

Let p be the area of the polygon formed by the inequality  $|x| + |y| \le 3$  in the D square units, find the value of D. Cartesian plane. Find the value of *p*.

#### 2004 HI7

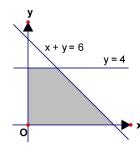
在圖中,設被三條直綫y=-x+3,y=x+1及 y = -x + 19 所圍出的陰影部分的面積是 R, 

In the figure, let the shaded area formed by the three straight lines y = -x + 3, y = x + 1 and y = -5x + 19 be R, find the value of R.



#### 2007 FI4.1

如圖一,設直綫x+y=6,y=4,x=0及 y=0所 圍成的封閉區域的面積是A平方單位,求A的值。 In Figure 1, let the area of the closed region bounded by the straight line x + y = 6 and y = 4, x = 0 and y = 0 be A square units, find the value of A.



### 2007 FG2.4

在座標平面上,某圓以T(3,3)為中心及經過原點O(0,0)。若A為該圓上的 一點使得 $\angle AOT = 45^{\circ}$  及  $\Delta AOT$  的面積是 O 個平方單位,求 O 的值。

On the coordinate plane, a circle with centre T(3,3) passes through the origin O(0,3)0). If A is a point on the circle such that  $\angle AOT = 45^{\circ}$  and the area of  $\triangle AOT$  is Q square units, find the value of Q.

# 2009 FG2.2

在座標平面上,若 x-軸、y-軸與直綫 3x+16y=12 所圍成三角形的面積是 b 平方單位, 求 b 的值。

In the coordinate plane, if the area of the triangle formed by the x-axis, y-axis and the line 3x + 16y = 12 is b square units, find the value of b.

## 2009 FG2.4

In the coordinate plane, the area of the region bounded by the following lines is

$$L_1$$
:  $y - 2 = 0$ 

$$L_2$$
:  $y + 2 = 0$ 

$$L_3$$
:  $4x + 7y - 10 = 0$ 

$$L_4$$
:  $4x + 7y + 20 = 0$ 

## **2011 FIS.3**

考慮直綫 12x - 4y + 24 = 0。若 x-軸、y-軸及此直綫所形成的三角形的面積 為 R 平方單位,求 R 的值。

Consider the line 12x - 4y + 24 = 0. If the area of the triangle formed by the x-axis, the y-axis and this line is R square units, what is the value of R?

# Answers

1990 FI3.3 16	1994 FI5.3 $\frac{1}{2}$	1996 FI4.1 $\frac{7}{2}$	1997 FI5.3 4	1999 HG4 1/2
2001 HG7 2	2002 HG3 18	2004 HI7 6	2007 FI4.1 16	2007 FG2.4 9
2009 FI2.2 $\frac{3}{2}$	2009 FG2.4 30	2011 FIS.3 6		