1984 FG7.2

在ΔABC 中，$\angle B = \angle C = 75°$。若 $q = \sin A$，求 q 的值。

In ΔABC, $\angle B = \angle C = 75°$. If $q = \sin A$, find the value of q .

1984 FG9.4

一面積為 12π 之圓，內接於一周界為 P 之等邊三角形，求 P 的值。

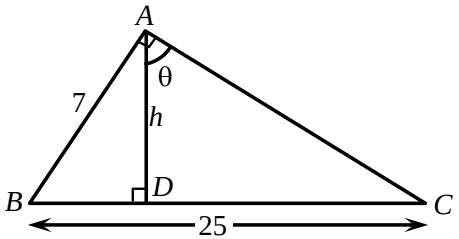
The area of a circle inscribed in an equilateral triangle is 12π.
If P is the perimeter of this triangle, find the value of P .

1988 FG10.3-4

在圖中，$AD \perp BC$，$BA \perp CA$，$AB = 7$，$BC = 25$，$AD = h$ 及 $\angle CAD = \theta$。

若 $100 \sin\theta = t$，求 t 及 h 的值。

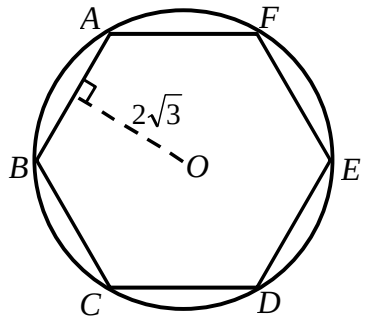
In the figure, $AD \perp BC$, $BA \perp CA$,
$AB = 7$, $BC = 25$, $AD = h$ and $\angle CAD = \theta$.
If $100 \sin\theta = t$, find the value of t and h .



1989 HI18

如圖二，$ABCDEF$ 為一正六邊形內接於圓形上，O 為圓心。若 O 至 AB 的距離為 $2\sqrt{3}$，且 p 為該正六邊形的周界，求 p 的值。

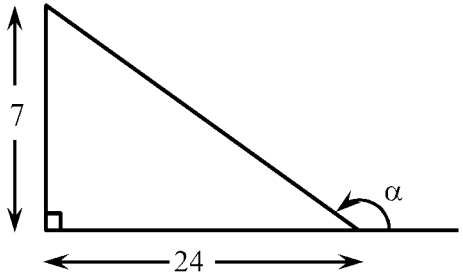
In figure 2, a regular hexagon $ABCDEF$ is inscribed in a circle centred at O. If the distance of O from AB is $2\sqrt{3}$ and p is the perimeter of the hexagon, find the value of p .



1989 FG8.2

如圖所示，$100 \cos\alpha = k$。求 k 的值。

In the figure, $100 \cos\alpha = k$.
Find the value of k .



1990 FI2.3

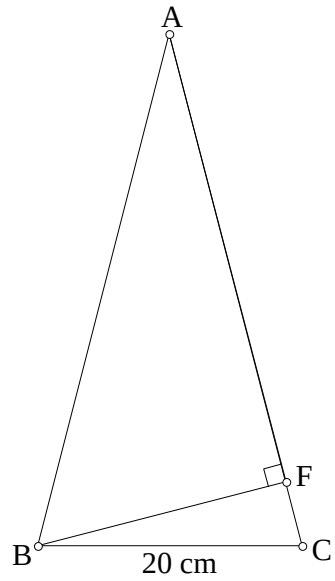
一圓內接於一周界長 36 cm 的正三角形。若圓的面積是 $k\pi$ cm^2，求 k 的值。

A circle is inscribed in an equilateral triangle of perimeter 36 cm.
If the area of the circle is $k\pi$ cm^2, find the value of k .

1992 HI12

在圖中，$AB = AC = 2BC$ 及 $BC = 20$ cm。若 BF 垂直於 AC，且 $AF = x$ cm，求 x 的值。

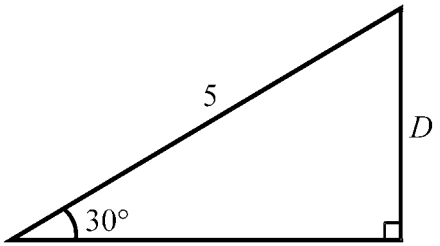
In the figure, $AB = AC = 2BC$ and $BC = 20$ cm.
If BF is perpendicular to AC and $AF = x$ cm ,
find the value of x .



1992 FSI.4

如圖所示，求 D 的值。

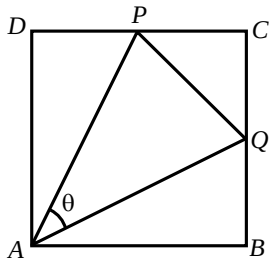
Find the value of D in the figure .



1993 FG10

$ABCD$ 乃一邊長為 $20\sqrt{5}x$ 的正方形。P、Q 分別為 DC 及 BC 的中點。

$ABCD$ is a square of side length $20\sqrt{5}x$.
P, Q are midpoints of DC and BC respectively.



G10.1 若 $AP = ax$，求 a 的值。

If $AP = ax$, find the value of a.

G10.2 若 $PQ = b\sqrt{10}x$ ，求 b 的值。

If $PQ = b\sqrt{10}x$, find the value of b .

G10.3 若由 A 至 PQ 的距離為 $c\sqrt{10}x$ ，求 c 的值。

If the distance from A to PQ is $c\sqrt{10}x$, find the value of c .

G10.4 若 $\sin\theta = \frac{d}{100}$ ，求 d 的值。If $\sin\theta = \frac{d}{100}$, find the value of d .

1994 HG4

已知一圓內接等邊三角形的周界為 12，試求此圓的面積 (以 π 表示)。

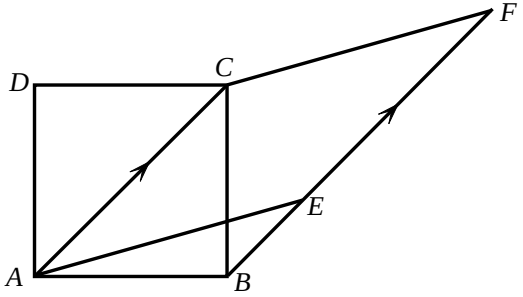
Given that the perimeter of an equilateral triangle inscribed in a circle is 12. Find the area of the circle in terms of π .

1998 FG5.4

在圖中，*ABCD* 為一正方形，*BF* // *AC*，且 *AEFC* 為一菱形。

若∠*EAC* = *d*°，求 *d* 的值。

In the figure, *ABCD* is a square, *BF* // *AC*, and *AEFC* is a rhombus. If ∠*EAC*= *d*°, find the value of *d* .



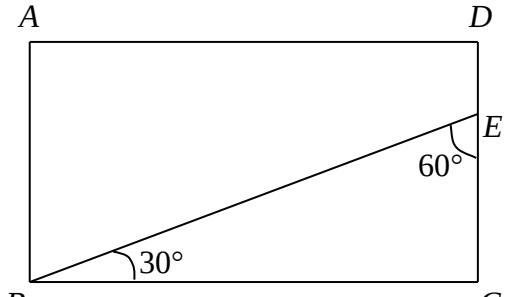
2000 FG2.2

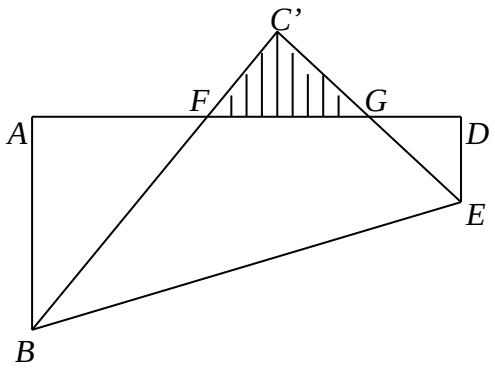
在左圖中，*ABCD* 是一長方形。*DE* : *EC* = 1 : 5，且 $DE = 12\frac{1}{4}$ 。

Δ*BCE* 沿 *BE* 摺去另一方。設 *b* 為右圖中陰影部份的面積，求 *b* 的值。

In the left figure, *ABCD* is a rectangle. *DE*:*EC* = 1: 5, and $DE = 12\frac{1}{4}$.

Δ*BCE* is folded along the side *BE*. If *b* is the area of the shaded part as shown in the right figure , find the value of *b* .





2002 HG10

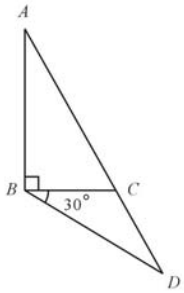
已知三角形 *ABC* 中的∠*A* 為一直角，$\sin^2 C - \cos^2 C = \frac{1}{4}$，$AB = \sqrt{40}$ 及 *BC* = *x*，求 *x* 的值。

Given that ∠*A* is a right angle in triangle *ABC*, $\sin^2 C - \cos^2 C = \frac{1}{4}$, $AB = \sqrt{40}$ and *BC* = *x*, find the value of *x* .

2005 FG3.2

如圖，*C* 在 *AD* 上且 *AB* = *BD* = 1 cm，∠*ABC* = 90°，∠*CBD* = 30°。若 *CD* = *b* cm，求 *b* 的值。

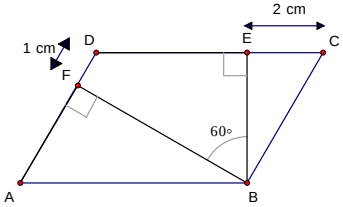
In the figure, *C* lies on *AD*, *AB* = *BD* = 1 cm, ∠*ABC* = 90° and ∠*CBD* = 30° . If *CD* = *b* cm , find the value of *b* .



2006 FG4.1

如圖，平行四邊形 *ABCD*，*BE* ⊥ *CD*，*BF* ⊥ *AD*，*CE* = 2 cm，*DF* = 1 cm 及 ∠*EBF* = 60°。若平行四邊形 *ABCD* 的面積是 *R* cm²，求 *R* 的值。

In the figure, *ABCD* is a parallelogram, *BE* ⊥ *CD*, *BF* ⊥ *AD*, *CE* = 2 cm, *DF* = 1 cm and ∠*EBF* = 60°. If the area of the parallelogram *ABCD* is *R* cm² , find the value of *R* .

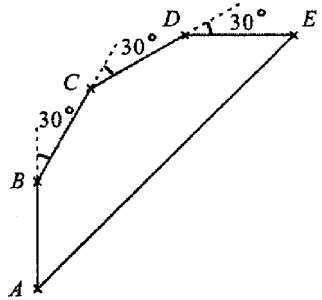


2007 FG3.3

如圖，一螞蟻由 *A* 點出發，往前直走 5 sec 15°厘米至 *B* 點；接著右轉 30°，往前直走 5 sec 15°厘米至 *C* 點。螞蟻再重覆右轉 30°及往前直走 5 sec 15°厘米兩次，分別到達 *D* 點及 *E* 點。

若 *AE* 的距離是 *x* 厘米，求 *x* 的值。

In the figure, an ant runs ahead straightly for 5 sec 15° cm from point *A* to point *B*. It then turns 30° to the right and run 5 sec 15° cm to point *C*. Again it repeatedly turns 30° to the right and run 5 sec 15° cm twice to reach the points *D* and *E* respectively. If the distance of *AE* is *x* cm, find the value of *x* .

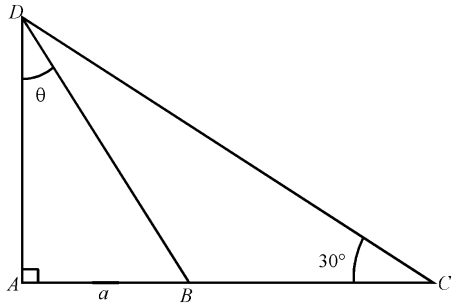


2013 HI3

如圖所示為一直角三角形 *ACD*，其中 *B* 是 *AC* 上的點且 *BC* = 2*AB*。

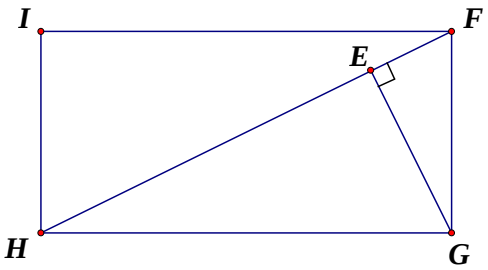
已知 *AB* = *a* 及 ∠*ACD* = 30°，求 θ 的值。

The figure shows a right-angled triangle *ACD* where *B* is a point on *AC* and *BC* = 2*AB*. Given that *AB* = *a* and ∠*ACD* = 30°, find the value of θ .



2018 FI3.4

長方形 $FGHI$ 被直綫 FH 分為兩個直角三角形。三角形 ΔFGH 被直綫 EG 分為另外兩個直角三角形。若 FH：FG = 2：1 及三角形 ΔEGH 與三角形 ΔFEG 的面積比為 D：1，求 D 的值。



Suppose that a rectangle $FGHI$ is divided into two right-angled triangles by line FH. The triangle ΔFGH is then divided into two right-angled triangles by line EG. If the ratio of lengths FH : FG is 2 : 1 and the ratio of the areas of ΔEGH to ΔFEG is D : 1 , determine the value of D .

Answers

1984 FG7.2 $\frac{1}{2}$	1984 FG9.4 36	1988 FG10.3-4 $t = 96,\ h = \frac{168}{25}$	1989 HI18 24	1989 FG8.2 –96
1990 FI2.3 12	1992 HI12 35	1992 FSI.4 $\frac{5}{2}$	1993 FG10.1 50	1993 FG10.2 10
1993 FG10.3 15	1993 FG10.4 60	1994 HG4 $\frac{16\pi}{3}$	1998 FG5.4 30	2000 FG2.2 9
2002 HG10 8	2005 FG3.2 $\frac{1}{\sqrt{3}}$	2006 FG4.1 $12\sqrt{3}$	2007 FG3.3 $10\sqrt{3}$	2013 HI3 30°
2018 FI3.4 3				