1985 FI4.2
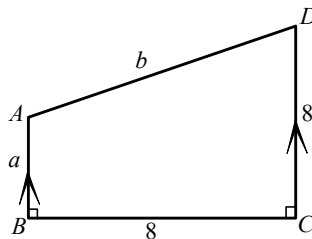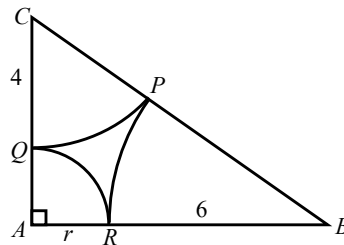
在圖中，$ABCD$ 為一梯形，AB 與 DC 平行

且 $\angle ABC = \angle DCB = 90°$。

若 $AB = a = 2$，$BC = CD = 8$ 及 $AD = b$，求 b 的值。

In the figure, $ABCD$ is a trapezium with AB parallel to DC and $\angle ABC = \angle DCB = 90°$. If $AB = a = 2$, $BC = CD = 8$ and $AD = b$, find the value of b .

1986 FG7.1

如圖所示，依次以 A、B、C 為圓心之弧 QR、RP、PQ 相切於 R、P、Q。若 $AR = r$，$RB = 6$，$QC = 4$，$\angle A = 90°$，求 r 的值。

In the figure, QR, RP, PQ are 3 arcs, centres at A, B, C respectively, touching one another at R, P, Q. If $AR = r$, $RB = 6$, $QC = 4$, $\angle A = 90°$, find the value of r .
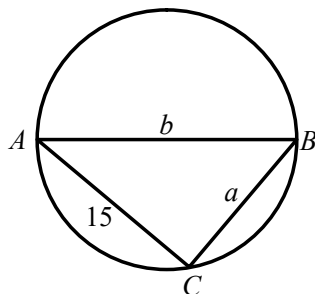
1987 FI4.2

附圖中，AB 為該圓之直徑。
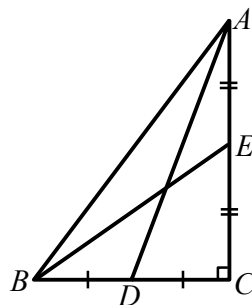
若 $AC = 15$，$BC = 8$ 及 $AB = b$，求 b 的值。

In the figure, AB is a diameter of the circle.

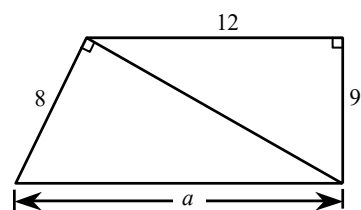If $AC = 15$, $BC = 8$ and $AB = b$, find the value of b .

1990 HI17

在 $\triangle ABC$ 中，$\angle C = 90°$ 及 D、E 分別為 BC 及 CA 的中點。若 $AD = 7$ 及 $BE = 4$，求 AB 的長度。

In $\triangle ABC$, $\angle C = 90°$ and D, E are the mid-points of BC and CA respectively. If $AD = 7$ and $BE = 4$, find the length of AB .
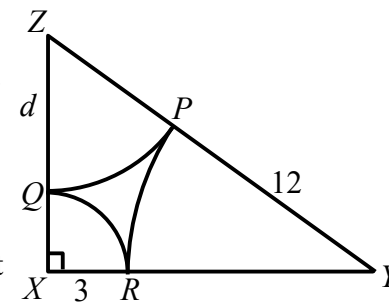
1990 FI5.1

如圖所示，求 a 的值。

In the figure, find the value of a .

1990 FG9.4

如圖所示，依次以 X，Y，Z 為圓心之三弧 $\overset{\frown}{QR}$、$\overset{\frown}{RP}$、$\overset{\frown}{PQ}$ 互相切於 P、Q、R。若 $ZQ = d$，$XR = 3$，$YP = 12$，$\angle X = 90°$，求 d 的值。

In the figure, $\overset{\frown}{QR}$, $\overset{\frown}{RP}$, $\overset{\frown}{PQ}$ are 3 arcs, centres at X, Y and Z respectively, touching one another at P, Q and R. If $ZQ = d$, $XR = 3$, $YP = 12$, $\angle X = 90°$, find the value of d .

1995 HG7 2008 FI4.4

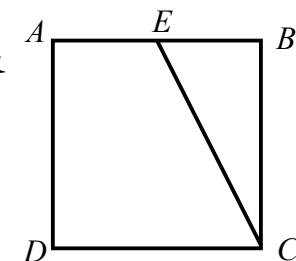在圖中，$ABCD$ 為一正方形，且 $AB = 1$ 及 CPQ 為一等邊三角形。求 $\triangle CPQ$ 的面積。

In the figure, $ABCD$ is a square where $AB = 1$ and CPQ is an equilateral triangle. Find the area of $\triangle CPQ$.
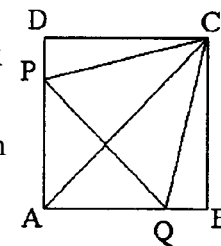
1998 HI4

在圖中，$ABCD$ 為一正方形。E 為 AB 上的一點，使得 $BE = 1$ 及 $CE = 2$。求正方形 $ABCD$ 的面積。

In the figure, $ABCD$ is a square.

E is a point on AB such that $BE = 1$ and $CE = 2$.

Find the area of the square $ABCD$.

2001 FG2.2

E 是長方形 $ABCD$ 內一點。已知 EA、EB、EC 和 ED 的長度分別為 2、$\sqrt{11}$、4 和 b，求 b 的值。

E is an interior point of the rectangle $ABCD$. Given that the lengths of EA, EB, EC and ED are 2, $\sqrt{11}$, 4 and b respectively, find the value of b .

2003 FI3.4

四邊形 $ABCD$ 兩對角綫 AC 和 BD 互相垂直。$AB = 5$，$BC = 4$，$CD = 3$。若 $DA = S$，求 S 的值。

The diagonals AC and BD of a quadrilateral $ABCD$ are perpendicular to each other. Given that $AB = 5$, $BC = 4$, $CD = 3$. If $DA = S$, find the value of S .

2006 HI10

如圖二，$ABCD$ 是一正方形，其邊長為 4 cm。綫段 PQ 和 MN 相交於點 O。 若 PD 、 NC 、 BQ 和 AM 的長度是 1 cm, OQ 的長度是 x cm，求 x 的值。

In Figure 2, $ABCD$ is a square with side length equal to 4 cm. The line segments PQ and MN intersect at the point O. If the lengths of PD, NC, BQ and AM are 1 cm and the length of OQ is x cm, find the value of x .
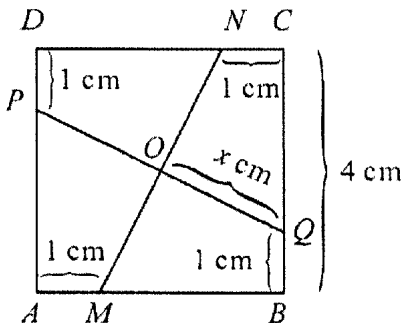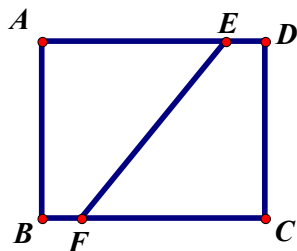
2008 HG10

如圖，$ABCD$ 是長方形紙張並有 $AB = 4$ cm 及 $BC = 5$ cm。將該紙張對摺，使 C 點與 A 點重合，得摺痕 EF。若 $EF = r$ cm，求 r 的值。

In the figure, $ABCD$ is rectangular piece of paper with $AB = 4$ cm and $BC = 5$ cm. Fold the paper by putting point C onto A to create a crease EF.
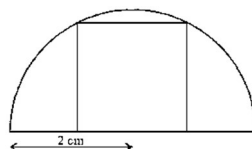If $EF = r$ cm, find the value of r .

2009 FG3.3

如圖，邊長為 Q cm 的正方形內接於半徑為 2 cm 的半圓中，求 Q 的值。

In the figure, a square of side length Q cm is inscribed in a semi-circle of radius 2 cm. Find the value of Q .

2014 FG1.1

若一個等腰三角形對應底邊(不是兩條等腰邊)的高是 8，且周長是 32，求該三角形的面積。

If an isosceles triangle has height 8 from the base, not the legs, and perimeters 32, determine the area of the triangle.
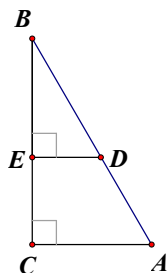
2015 FI3.4

在下圖中，$BE = AC$，$BD = \dfrac{1}{2}$ 及 $DE + BC = 1$。

若 δ 是 ED 的長度的 15 倍，求 δ 的值。

In the figure below, $BE = AC$, $BD = \dfrac{1}{2}$ and $DE + BC = 1$.

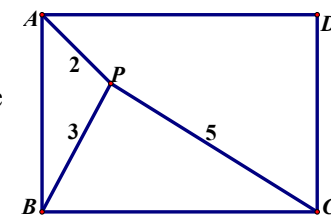If δ is 15 times the length of ED, determine the value of δ .

2018 HI7

如圖所示，P 為長方形 $ABCD$ 內的一點，使得 $PA = 2$，$PB = 3$ 及 $PC = 5$。求 PD 的長度。

As shown in the figure, P is a point inside a rectangle $ABCD$ such that $PA = 2$, $PB = 3$ and $PC = 5$. Find the length of PD .
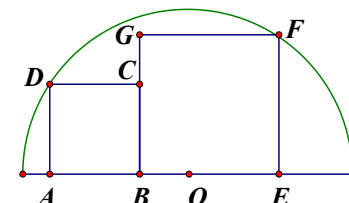
2019 HG2

圖一所示，$ABCD$ 和 $BEFG$ 是兩個緊貼的正方形，躺臥在一個以 O 為圓心，半徑為 5 cm 的半圓上。其中 A、B 和 E 在半圓的直徑，D 和 F 在半圓的弧上。設 $ABCD$ 與 $BEFG$ 的面積之和為 S cm^2，求 S 的值。

Figure 1 shows two adjacent squares $ABCD$ and $BEFG$ lying on a semi-circle with centre O and radius 5 cm. A, B and E lie on the diameter of the semi-circle, D and F lie on the semi-circular arc.
Let the sum of areas of $ABCD$ and $BEFG$ be S cm^2, find the value of S .
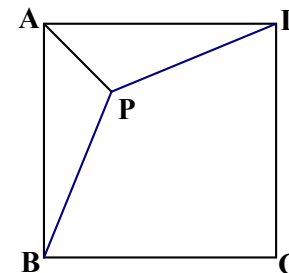
圖一 Figure 1

2023 HI9

在圖中，P 為正方形 $ABCD$ 內的一點使得$\triangle ABP \cong \triangle ADP$，$AP = 5\sqrt{2}$ 及 $BP = 13$。求正方形 $ABCD$ 的面積。

In the figure, P is a point inside the square $ABCD$ such that $\triangle ABP \cong \triangle ADP$. $AP = 5\sqrt{2}$ and $BP = 13$. Find the area of square $ABCD$.

Answers

1985 FI4.2 10	1986 FG7.1 2	1987 FI4.2 17	1990 HI17 $2\sqrt{13}$	1990 FI5.1 17
1990 FG9.4 5	1995 HG7 2008 FI4.4 $2\sqrt{3}-3$	1997 HI4 3	2001 FG2.2 3	2003 FG3.4 $3\sqrt{2}$
2006 HI10 $\sqrt{5}$	2008 HG10 $\dfrac{4\sqrt{41}}{5}$	2009 FG3.3 $\dfrac{4\sqrt{5}}{5}$	2014 FG1.1 48	2015 FI3.4 $\dfrac{15}{4}$
2018 HI7 $2\sqrt{5}$	2019 HG2 25	2023 HI9 289		