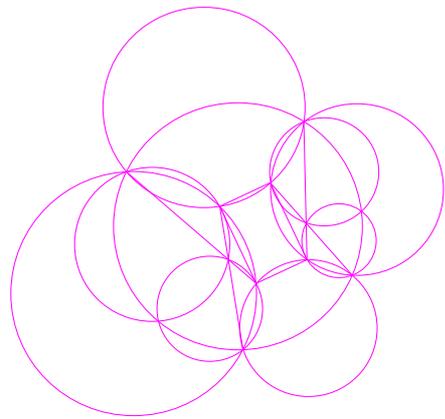
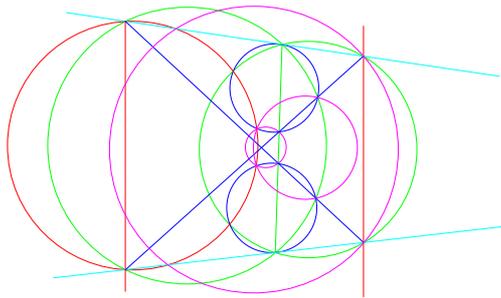


HI-XXX

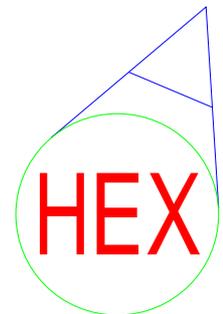
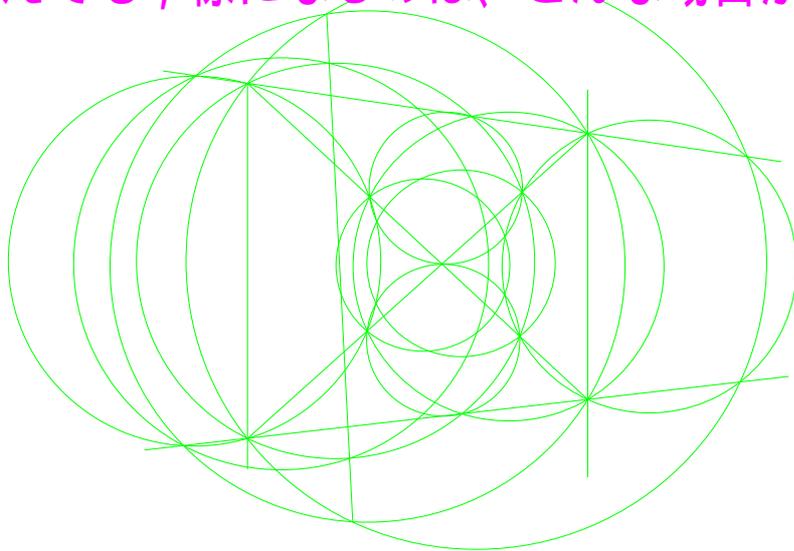
# これも、点線円幾何学

蛭子井博孝編著



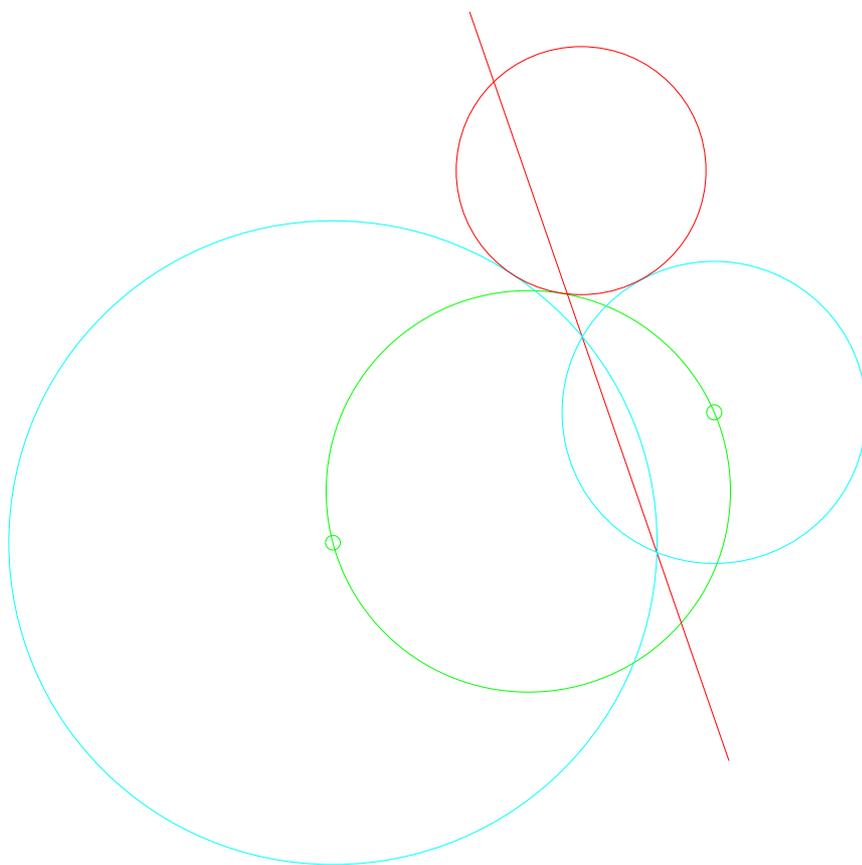
それも、点線円幾何学

共円が増えても、様になるのは、どんな場合か



HI-XXX

# これも、点線円幾何学

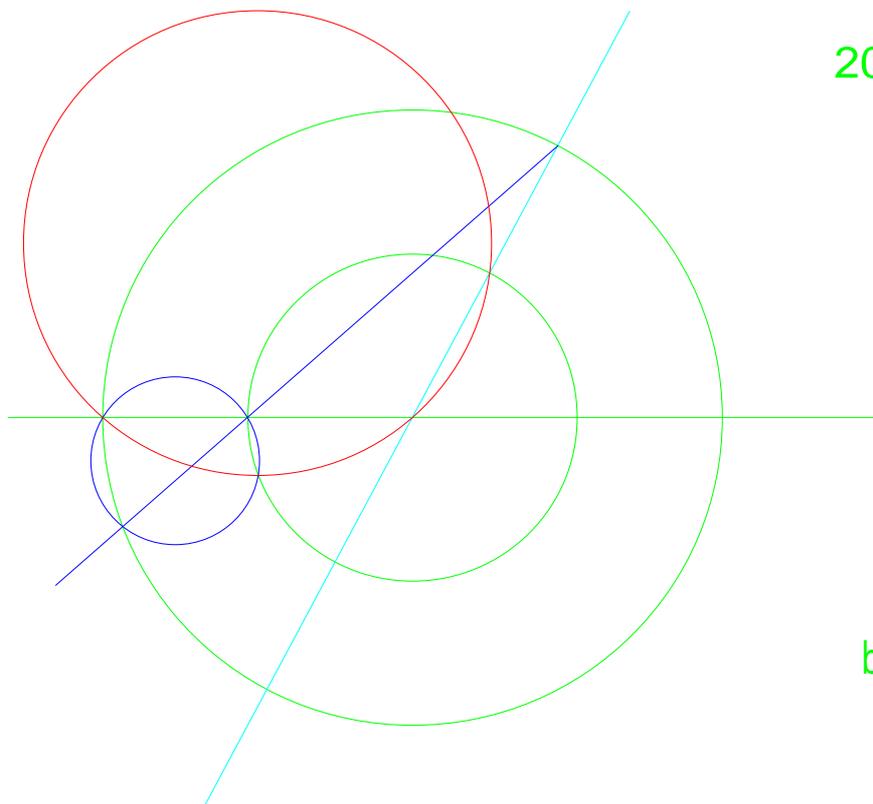


蛭子井博孝編著

# 同心円の定理

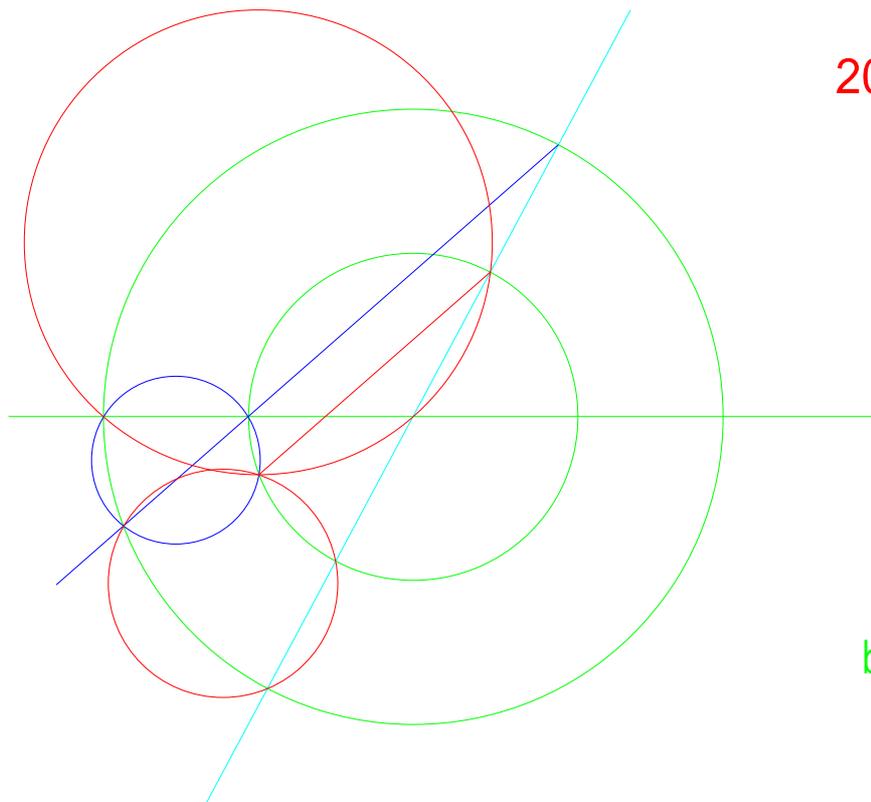
HI-101

2008-1-30



by 蛭子井博孝

2009-1-30

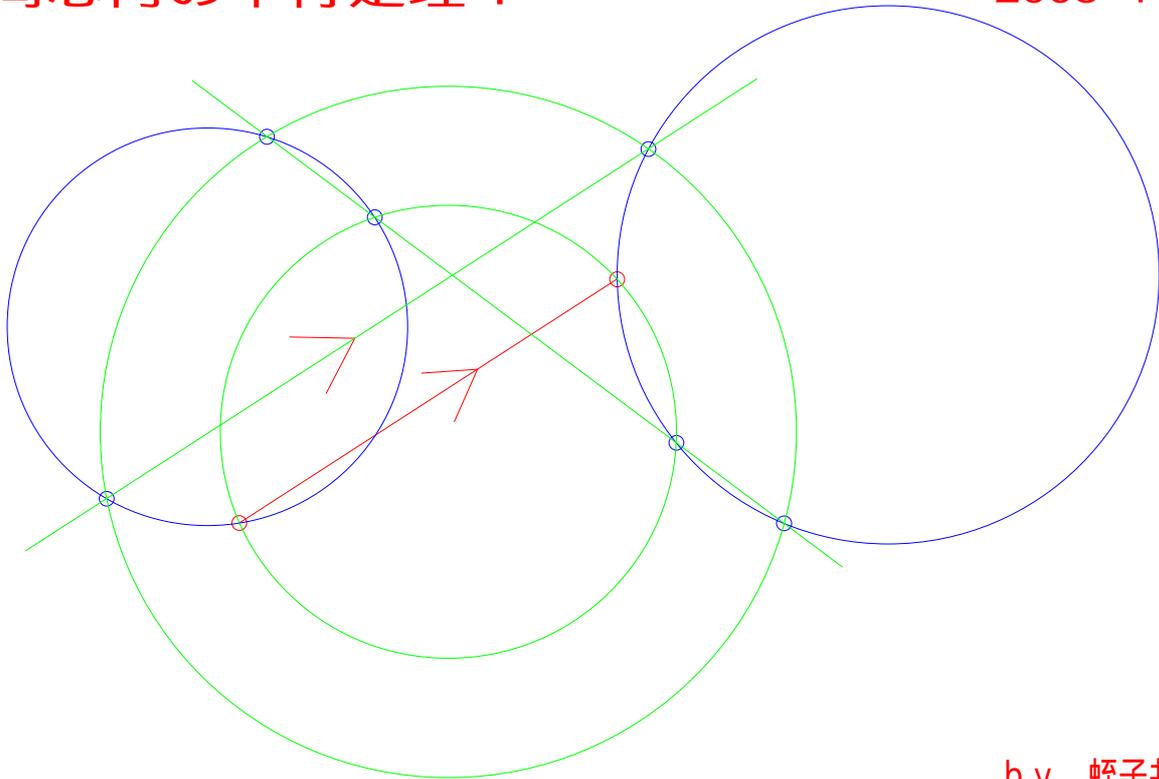


by 蛭子井博孝

HI-102

同心円の平行定理 1

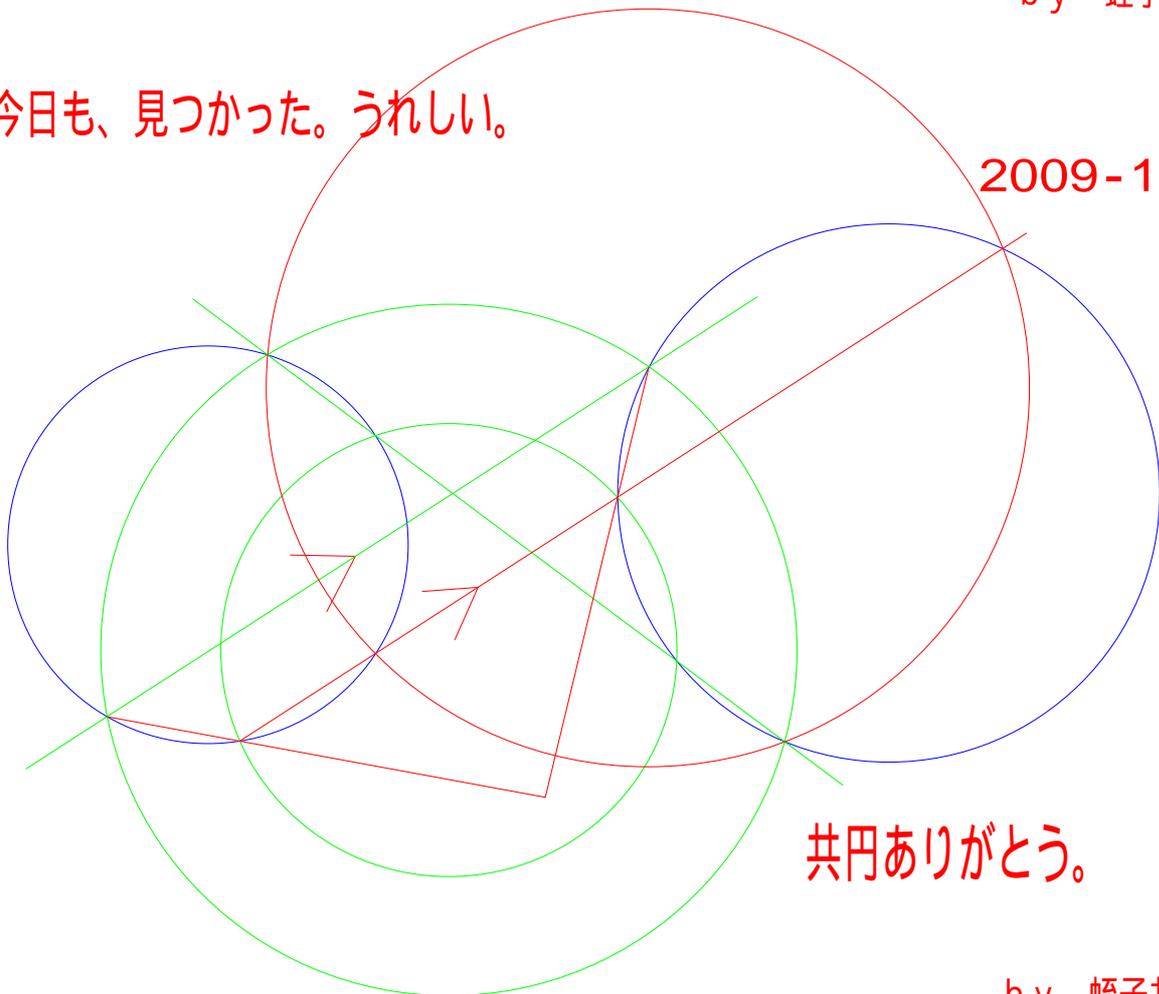
2008-1-30



by 蛭子井博孝

今日も、見つかった。うれしい。

2009-1-30



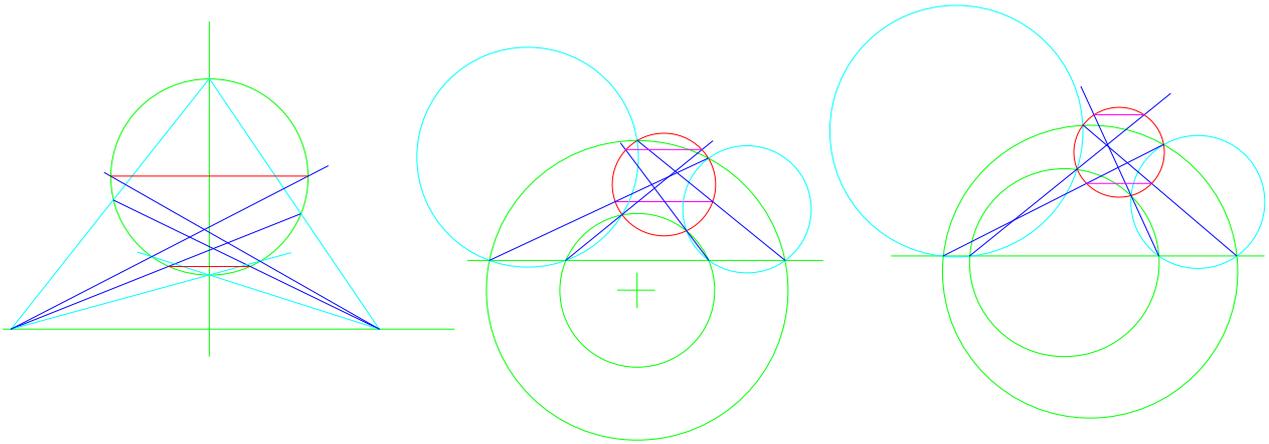
共円ありがとう。

by 蛭子井博孝

HI-103

# 同心円の平行線定理 2

2008-1-30



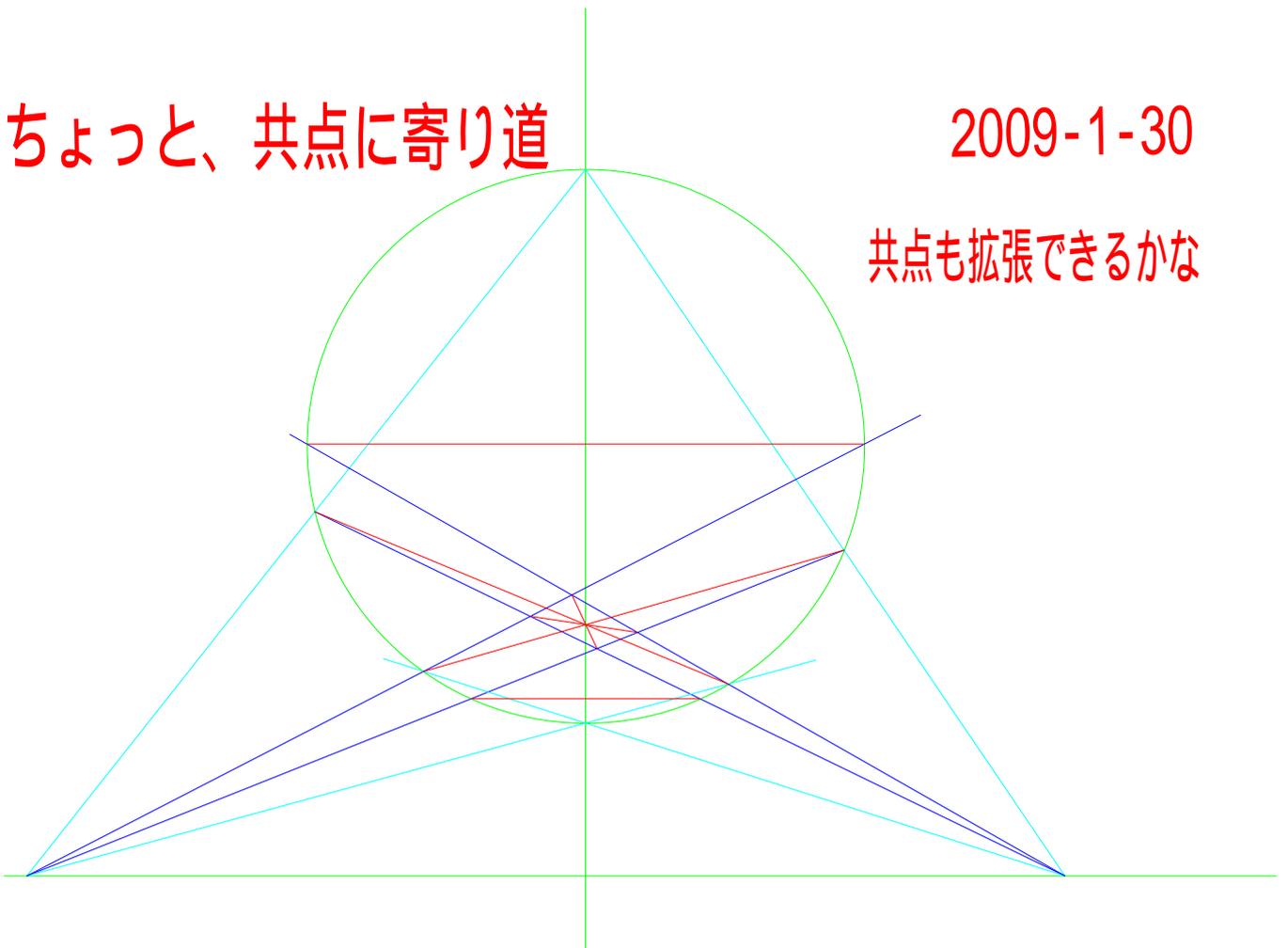
左の図と右の図本質的に同じだろうか

by 蛭子井博孝

## ちょっと、共点に寄り道

2009-1-30

共点も拡張できるかな

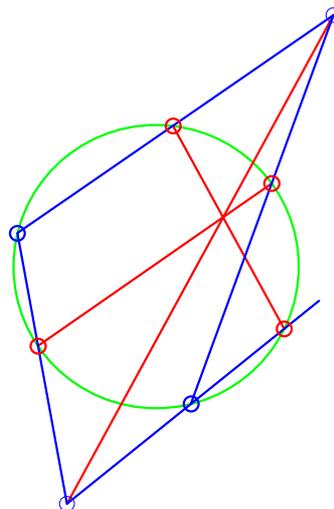
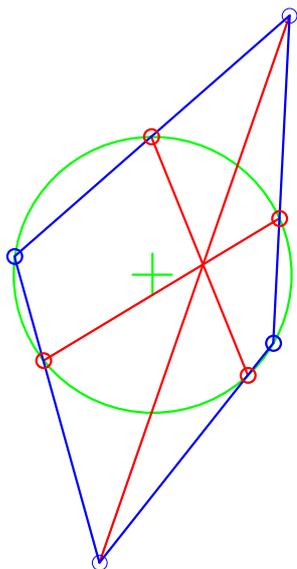


HI-104

2008-1-30

2008-1-31

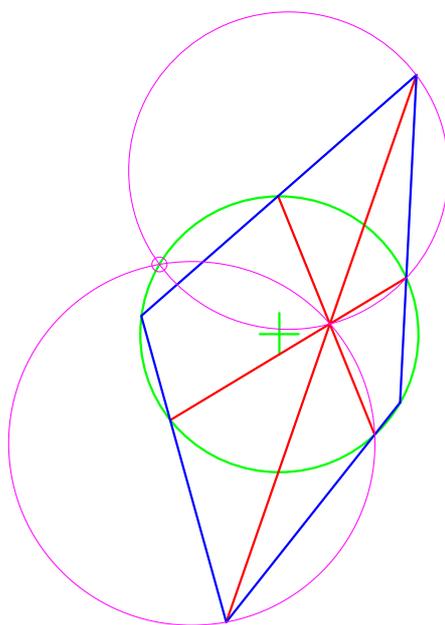
# 円と4点の共点定理



by 蛭子井博孝

3円共点現れる。

2009-1-31

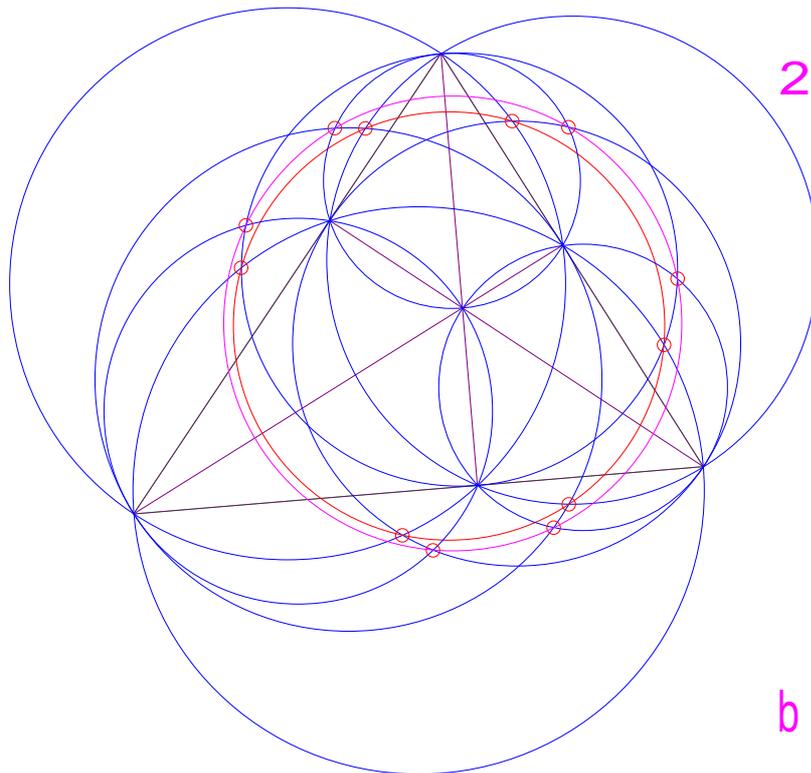


蛭子井博孝

# 9つの直径円の定理

HI-105

9つの直径円の12つの交点は、2つの円周上にある。

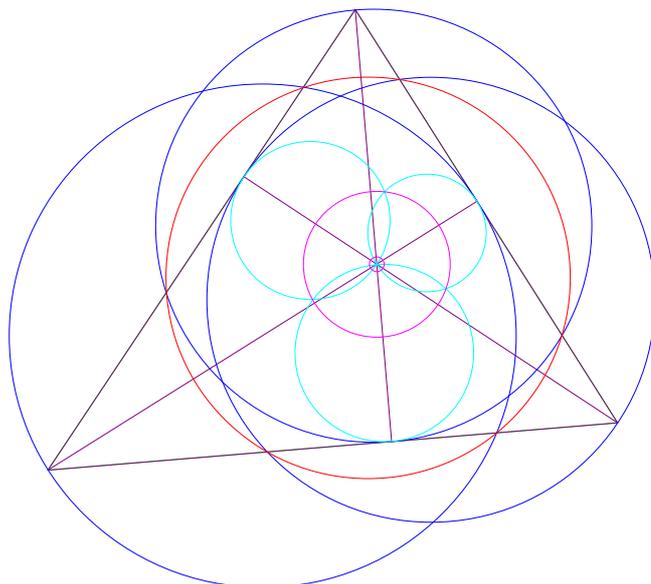


2008-1-31

by 蛭子井博孝

# 6点円と3点円

2009-1-31

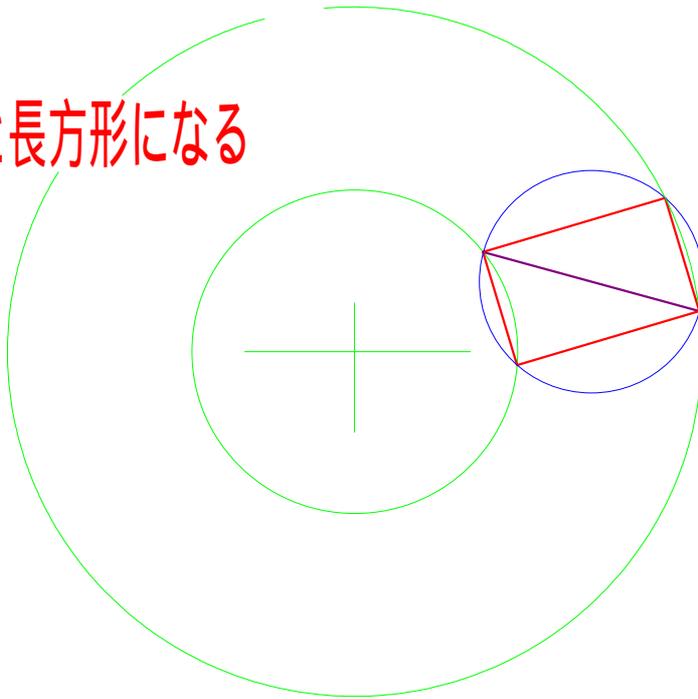


蛭子井博孝

HI-106

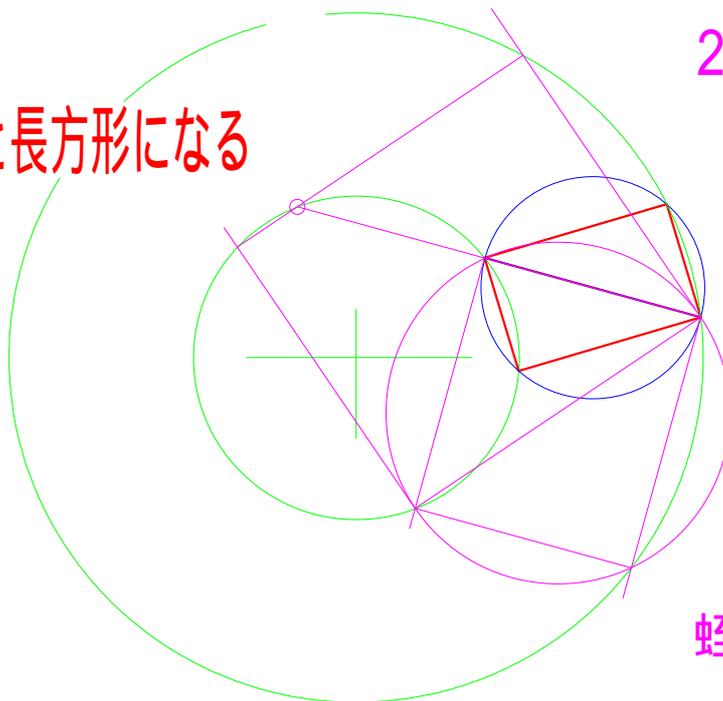
2008-1-31

直径円を描くと長方形になる



by 蛭子井博孝

直径円を描くと長方形になる



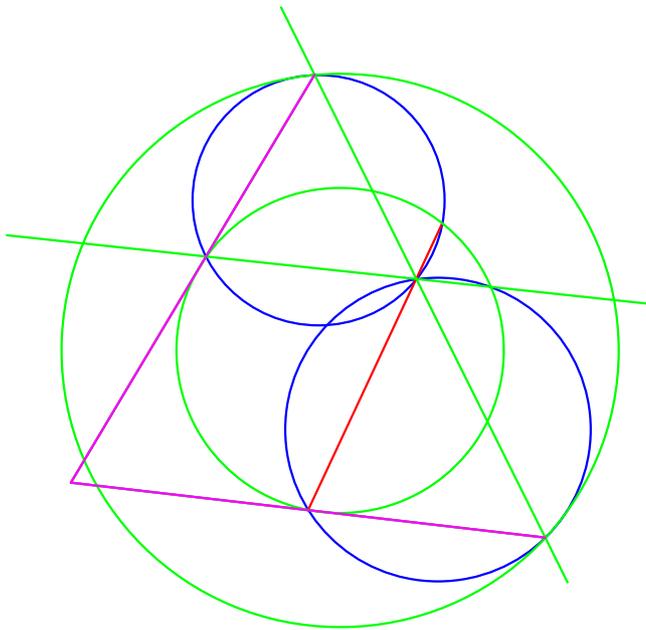
2009-1-31

蛭子井博孝

HI-107

# 同心円の共線定理

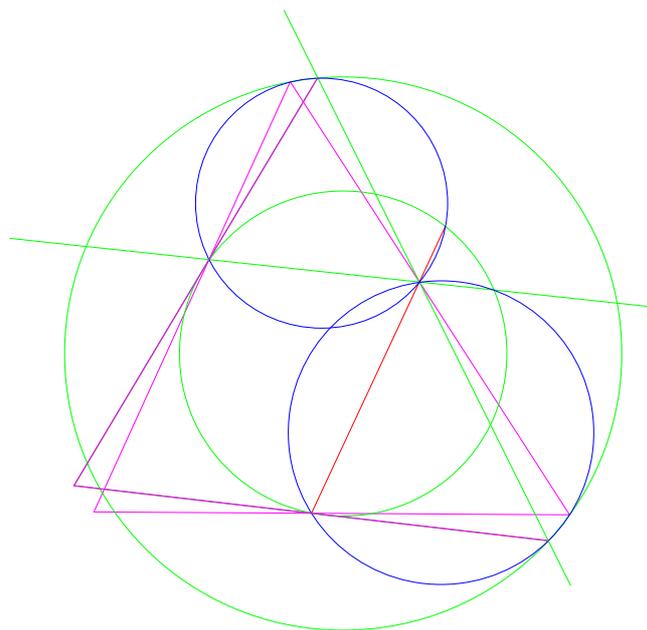
2008-1-31



2等辺三角形

by 蛭子井博孝

2009-1-31



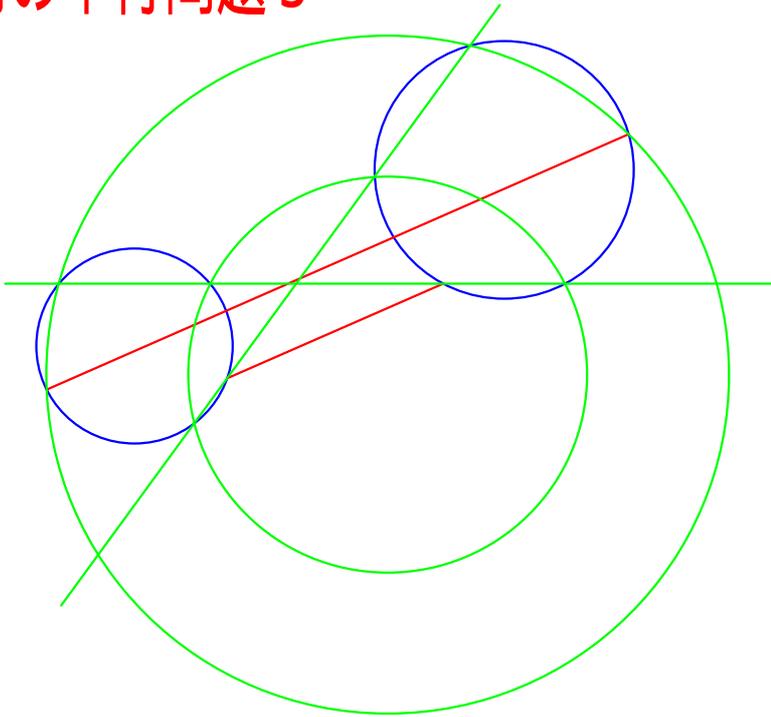
2つの  
2等辺三角形

蛭子井博孝

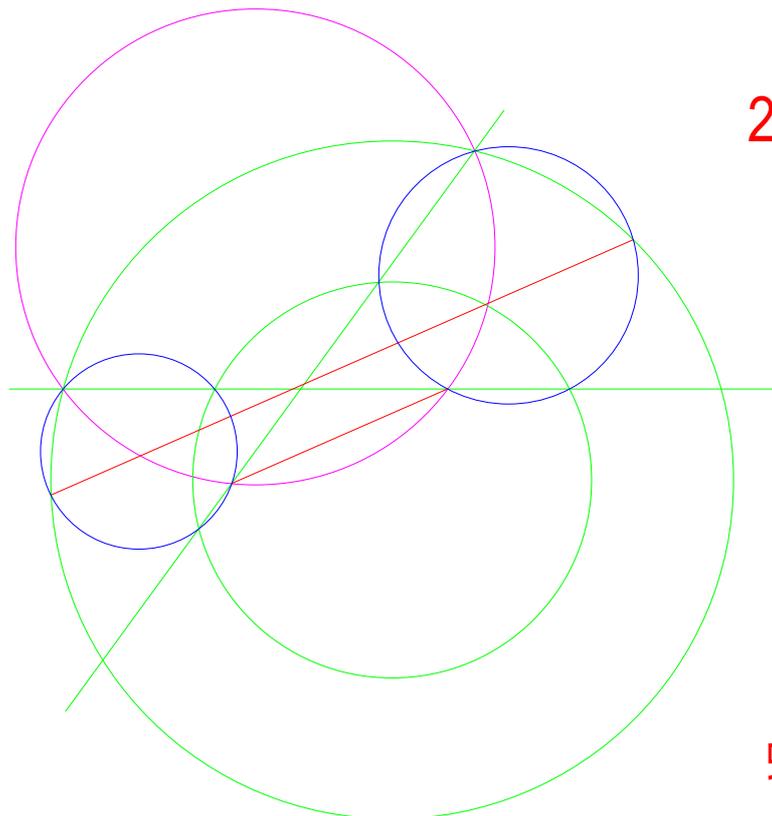
HI-108

2008-1-31

# 同心円の平行問題 3



by 蛭子井博孝

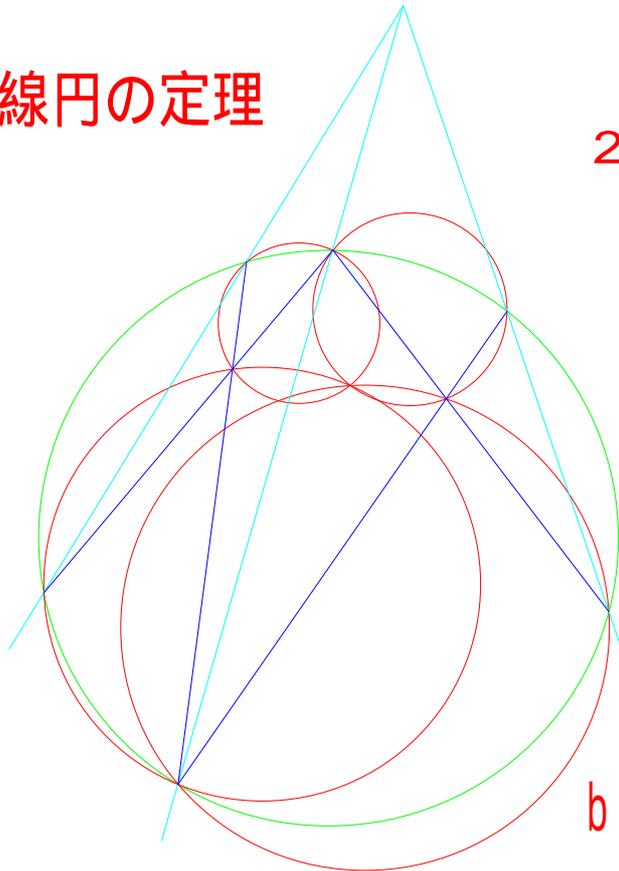


2009-1-31

蛭子井博孝

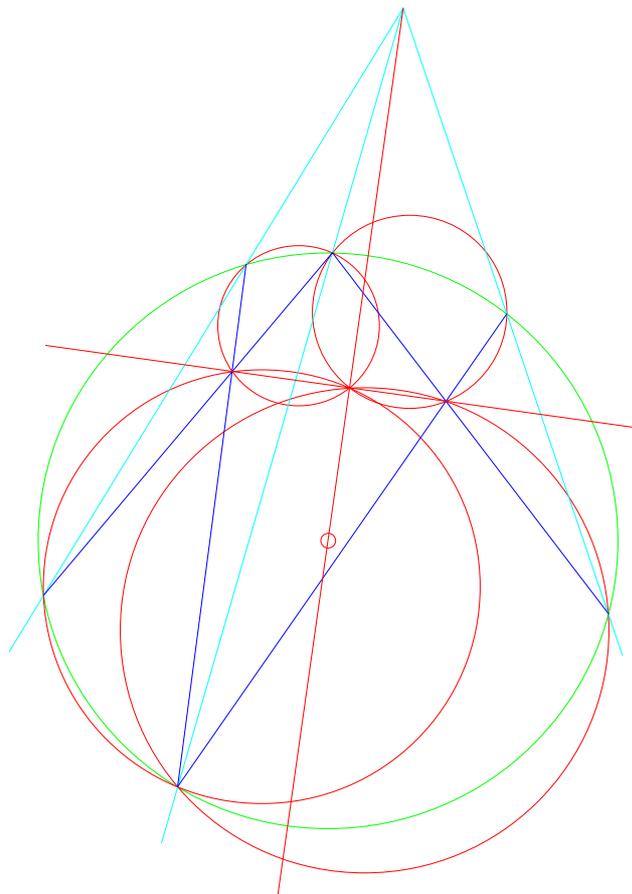
1点3直線円の定理

2008-2-1



by 蛭子井博孝

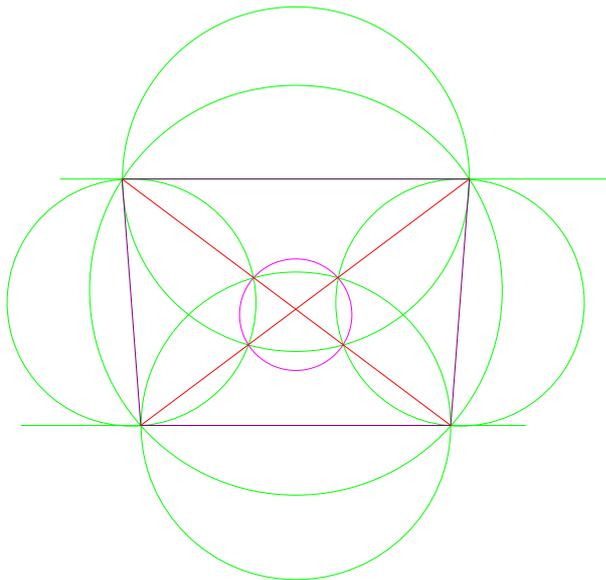
2009-1-31



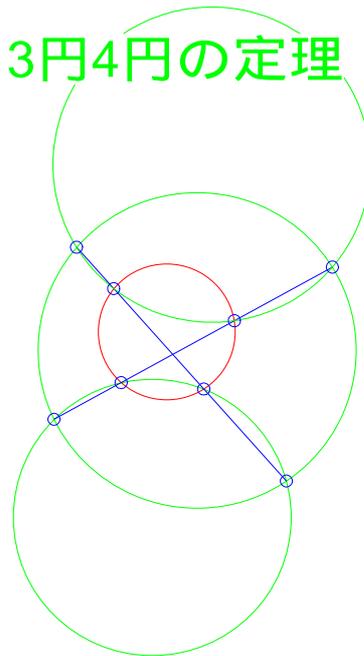
蛭子井博孝

2008-2-1

### 5円6円の定理



### 3円4円の定理



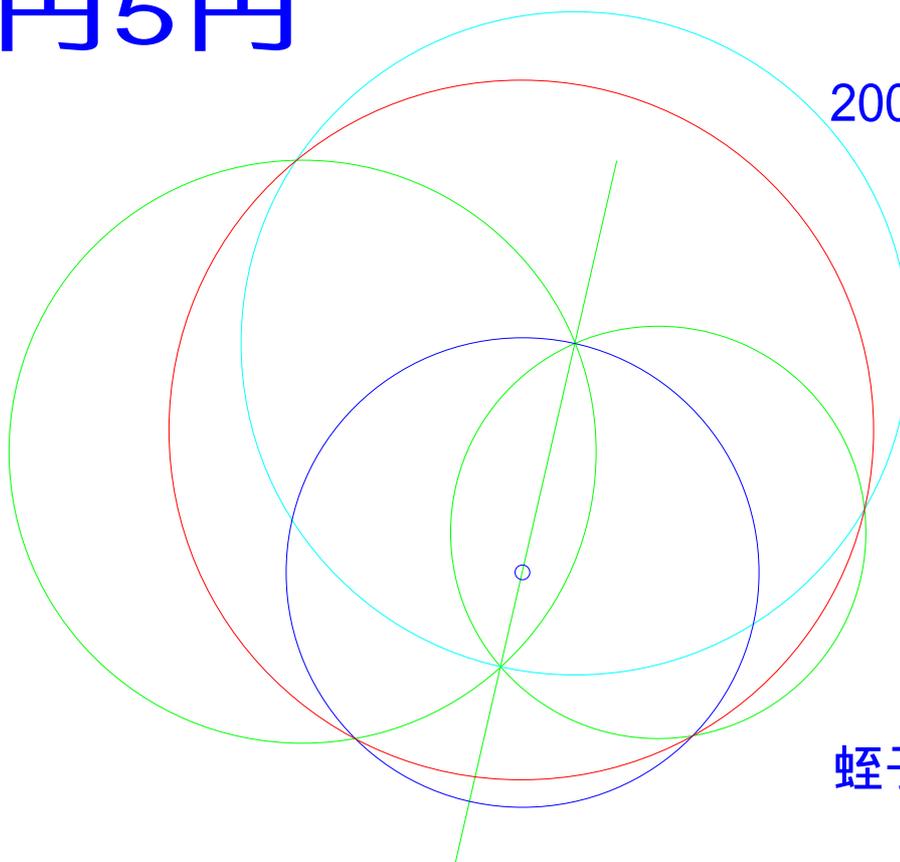
ごめんね。我慢してね。

by 蛭子井博孝

### 4円5円

まだまだ、一般性がないが  $n$ 円 $n+1$ 円

2009-1-31

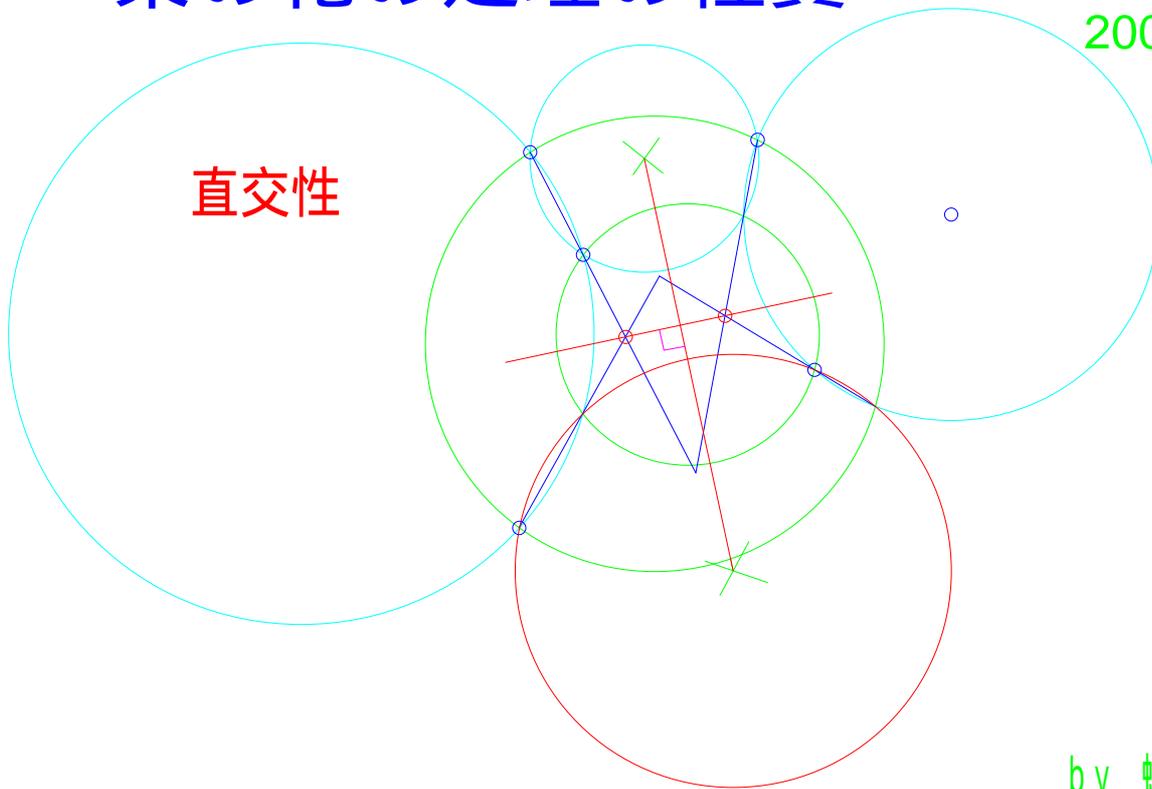


蛭子井博孝

HI-111

# 菜の花の定理の性質

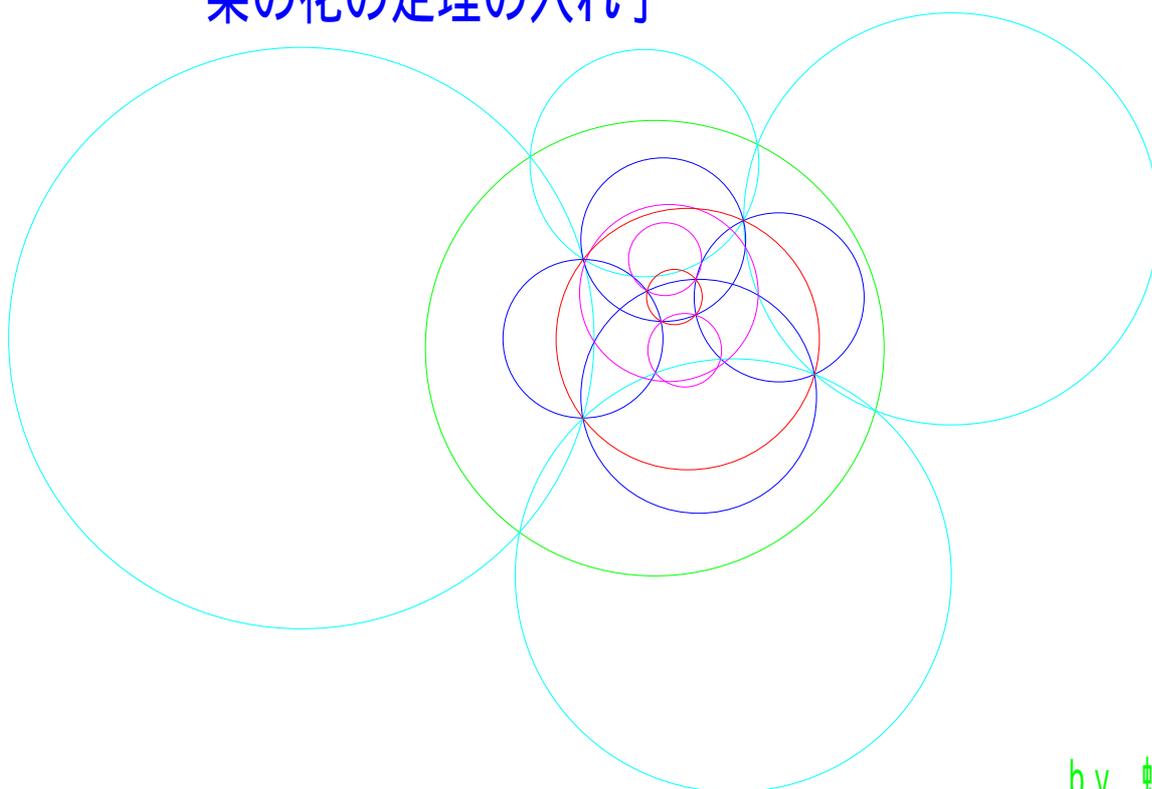
2008-2-1



by 蛭子井博孝

2009-1-31

# 菜の花の定理の入れ子



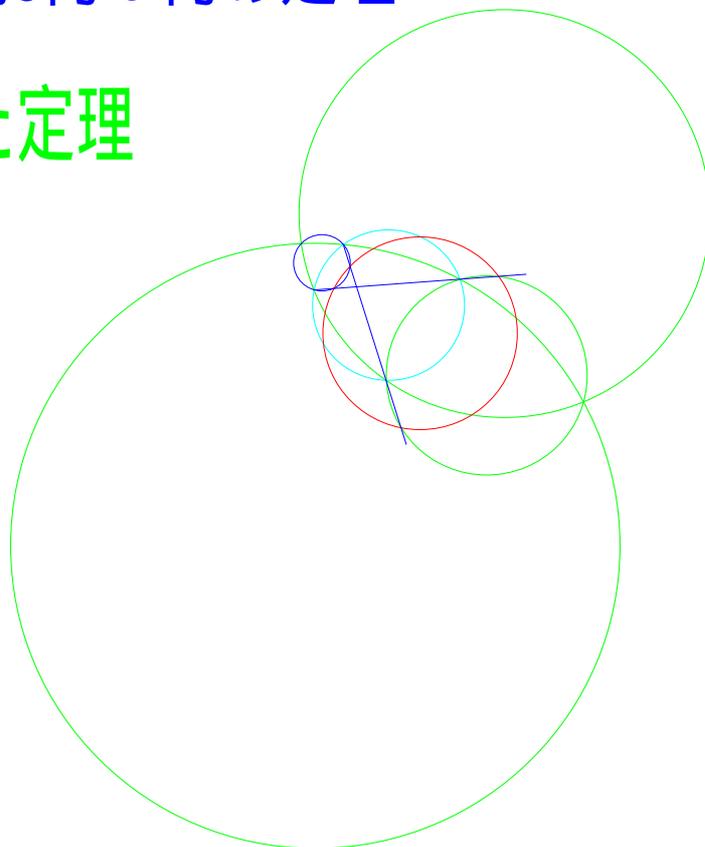
by 蛭子井博孝

# 3円 4円 5円 6円の定理

HI-112

## 開いた定理

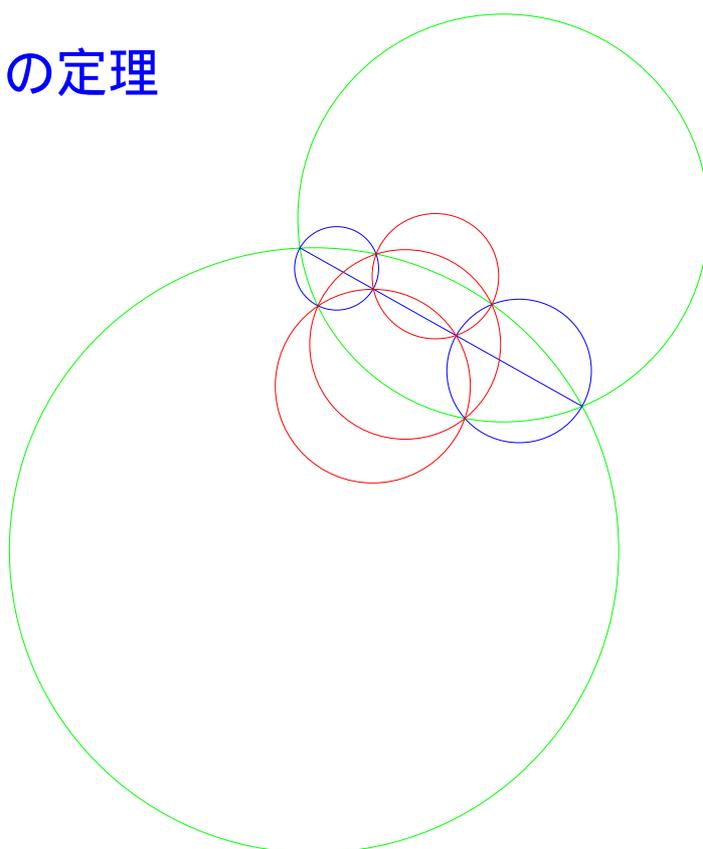
2008-2-1



by 蛭子井博孝

# 4円 7円の定理

2009-1-31

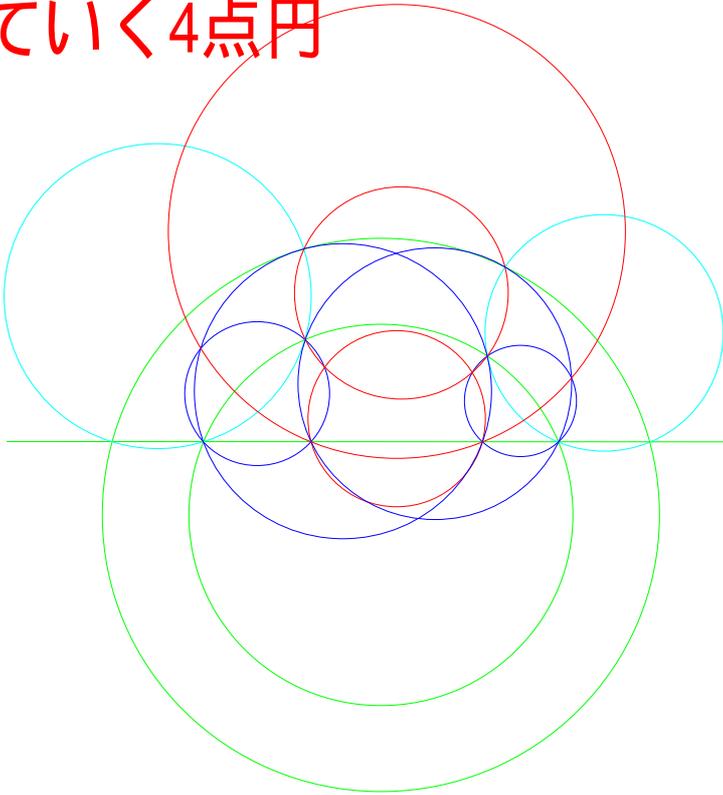


蛭子井博孝

HI-113

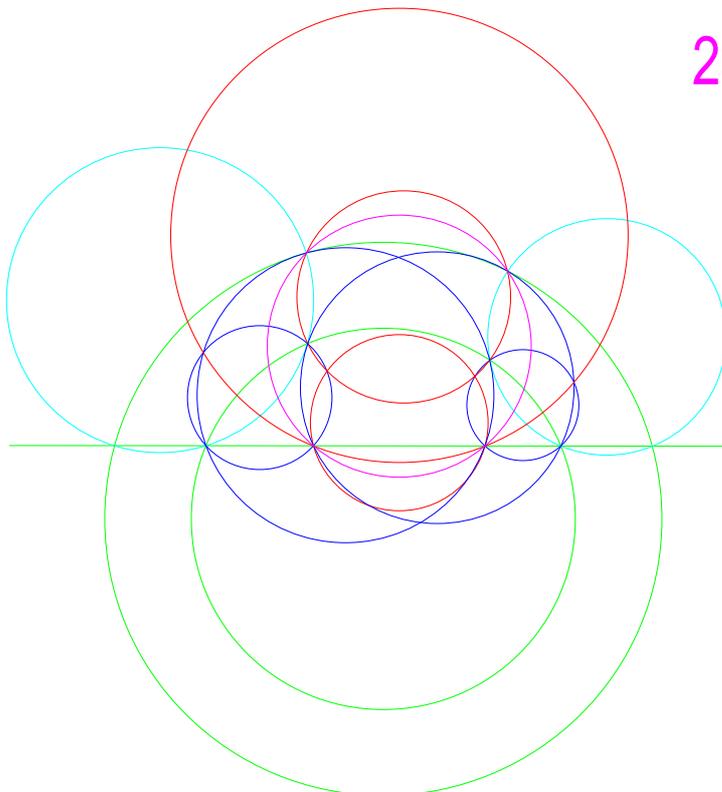
増えていく4点円

2008-2-1



by 蛭子井博孝

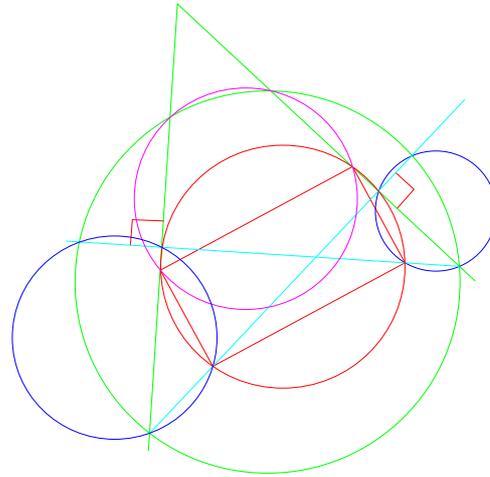
2009-1-31



蛭子井博孝

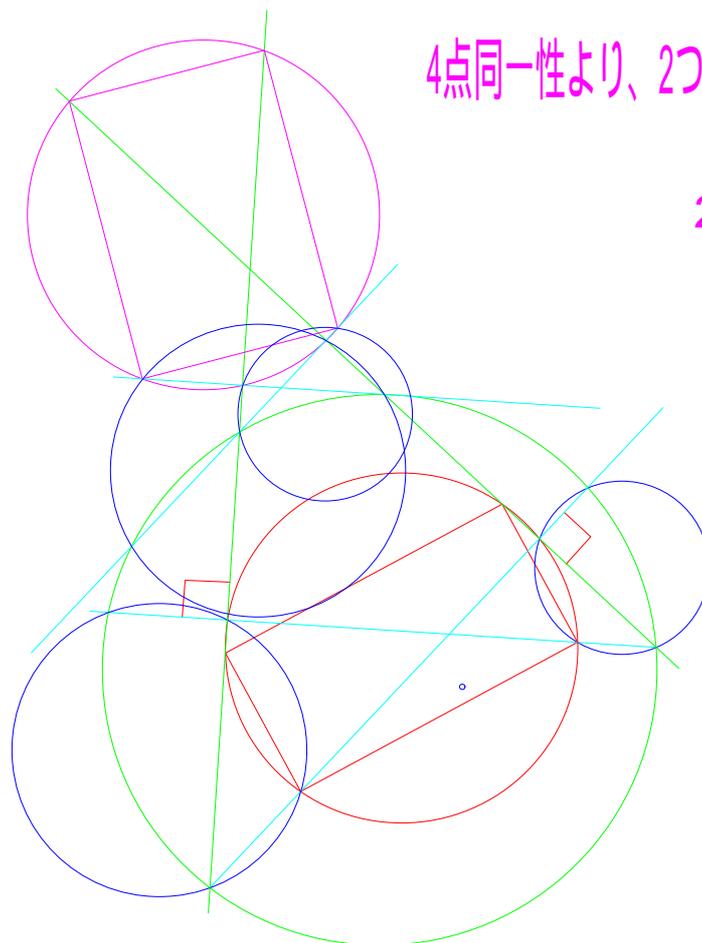
# 長方形を作る定理

2008-2-1



4点同一性より、2つの長方形ができる。

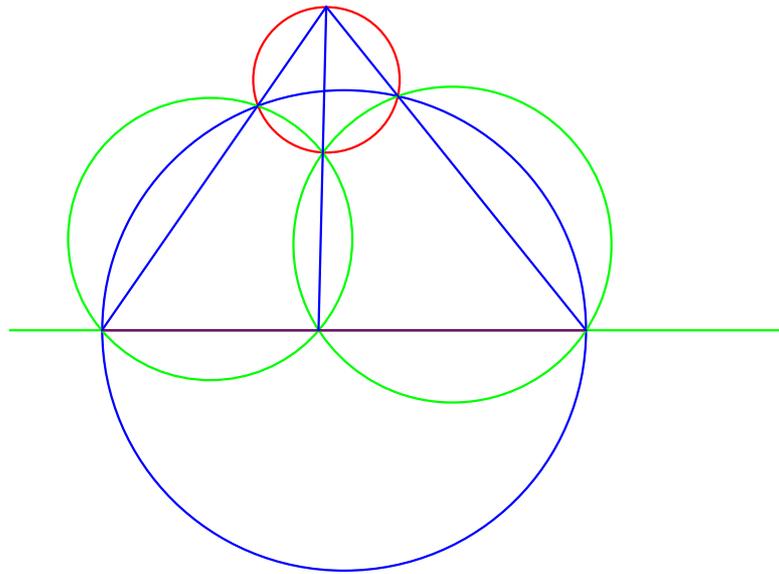
2009-1-31



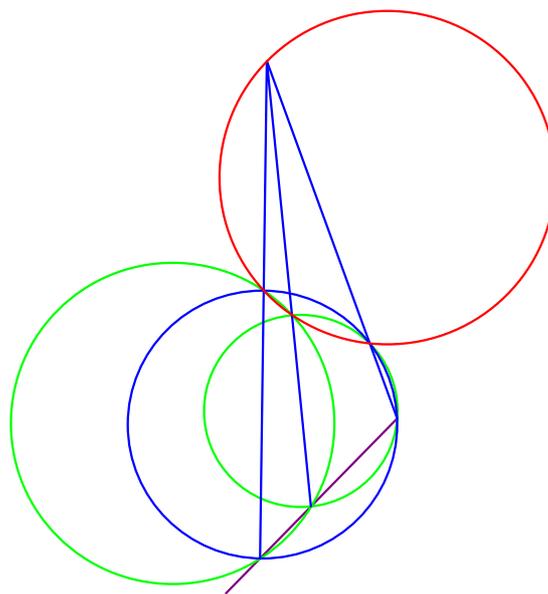
蛭子井博孝

# 2円と直径円の共点共円定理

2008-2-2



by 蛭子井博孝

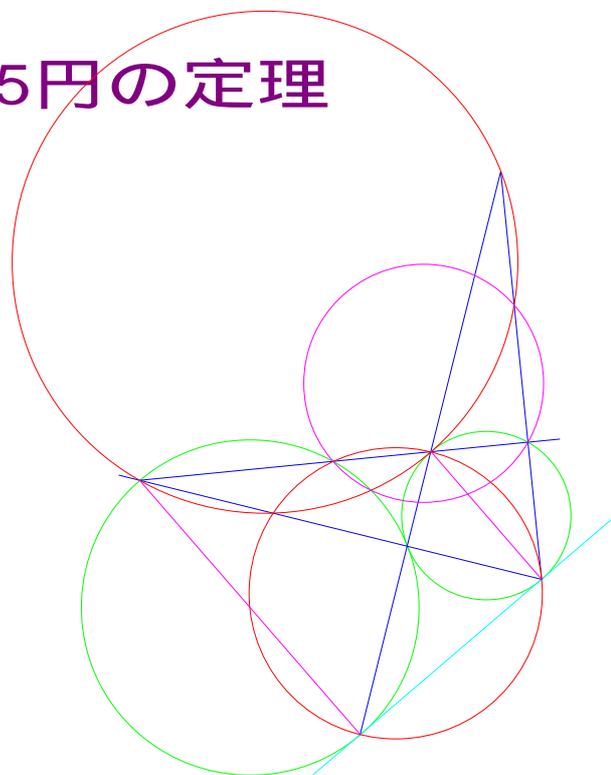


2008-2-2

HI-116

# 4円5円の定理

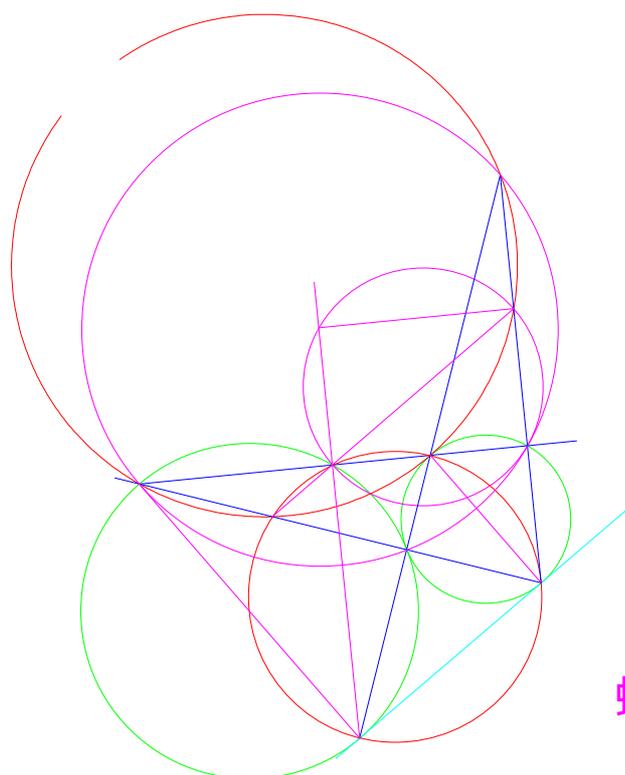
2008-2-2



by 蛭子井博孝

2009-1-31

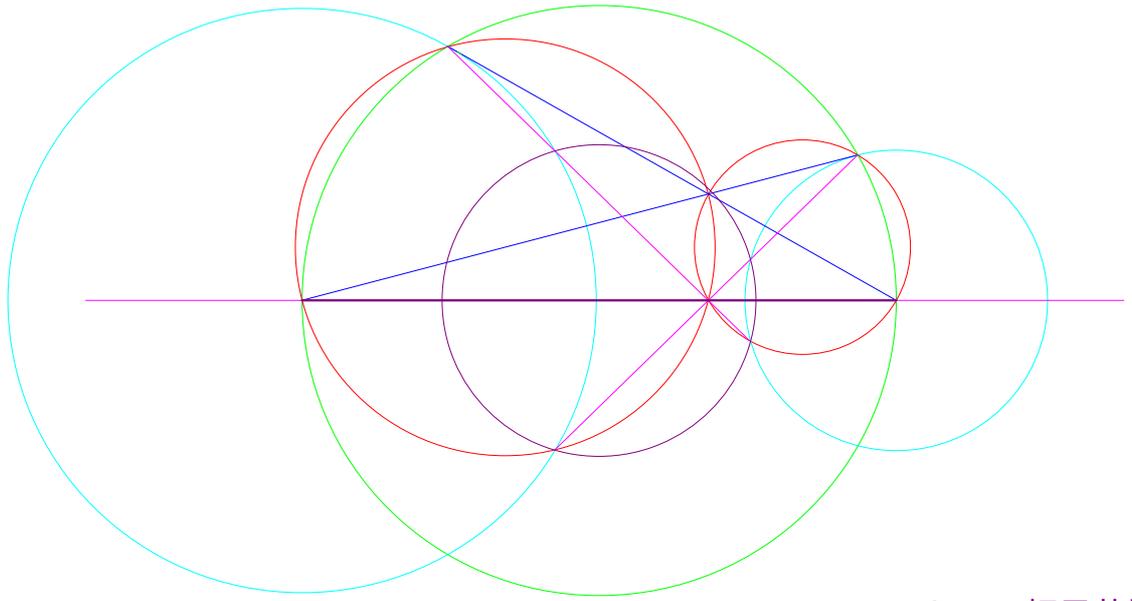
# 雑系



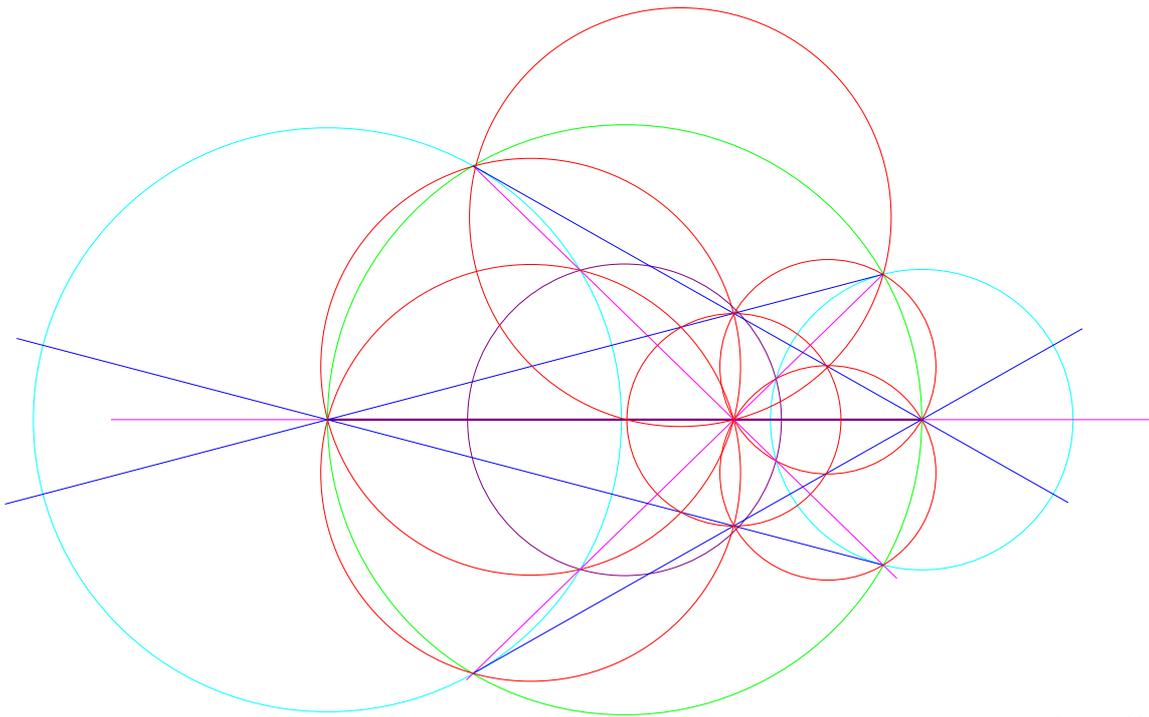
蛭子井博孝

HI-117

2008-2-2

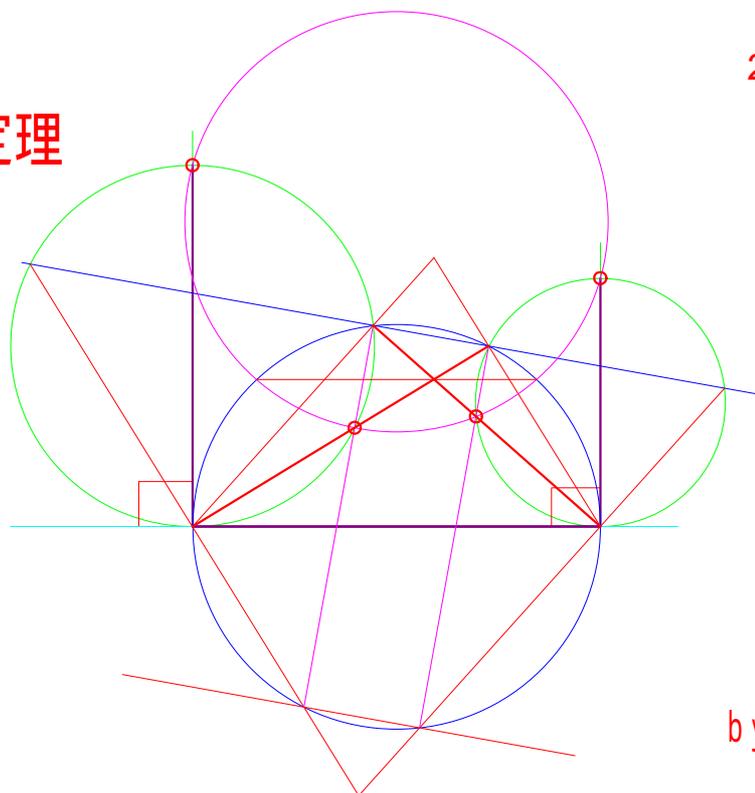


by 蛭子井博孝

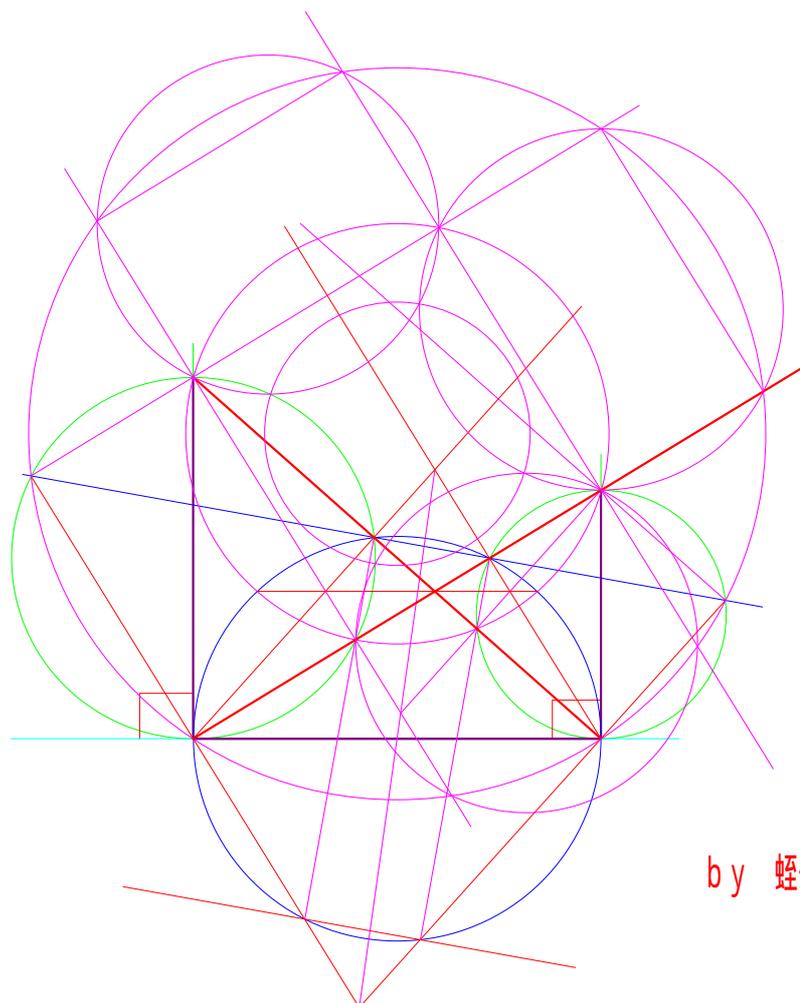


by 蛭子井博孝

開いた定理



by 蛭子井博孝

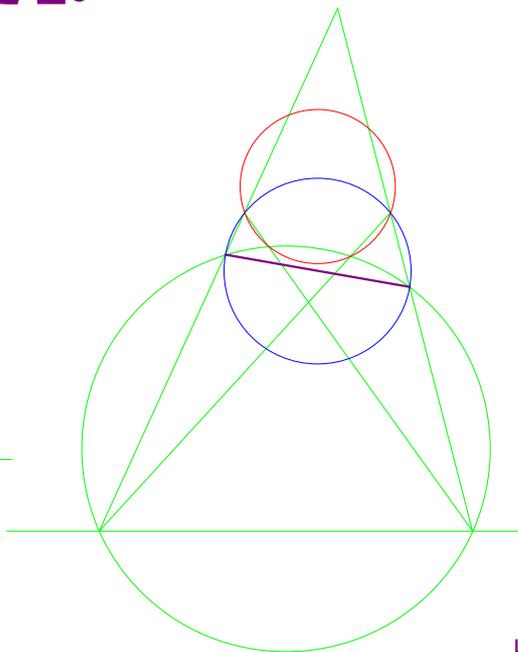
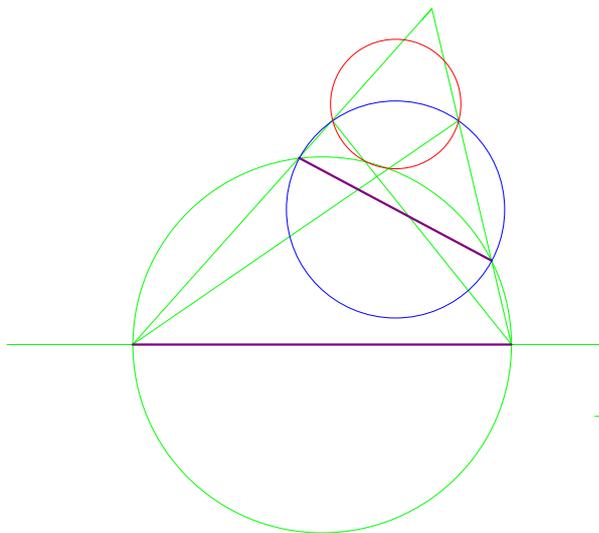


by 蛭子井博孝

共円、平行線などいくらでも見つかる開いた定理

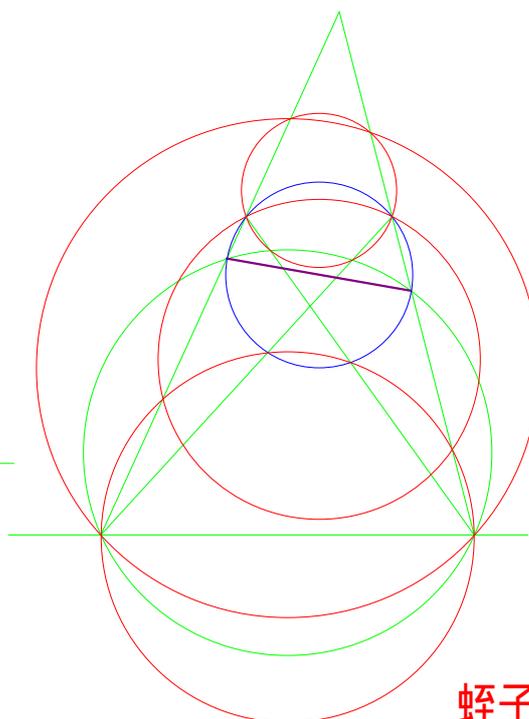
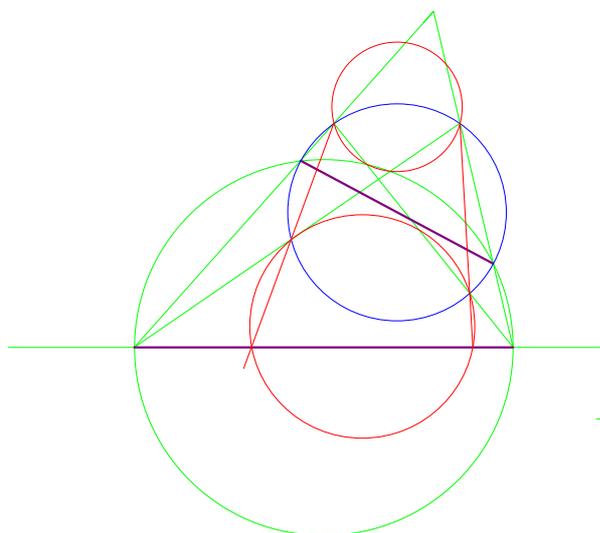
2008-2-2

開いた定理3  
2円3円の定理



by 蛭子井博孝

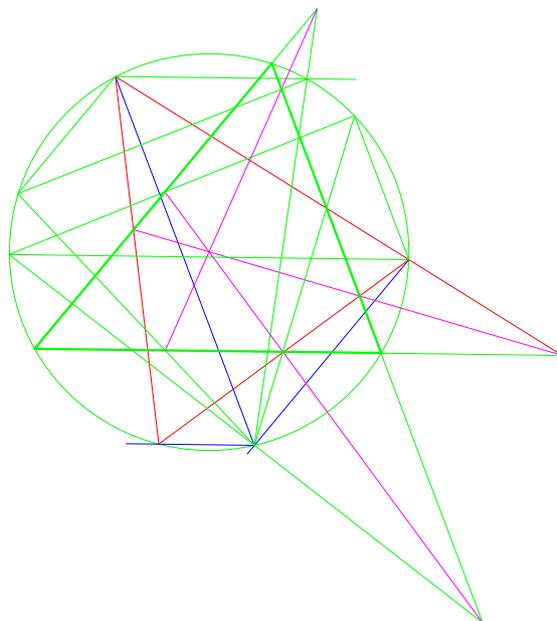
2009-2-3



蛭子井博孝

P点に関する三角形の鏡映定理

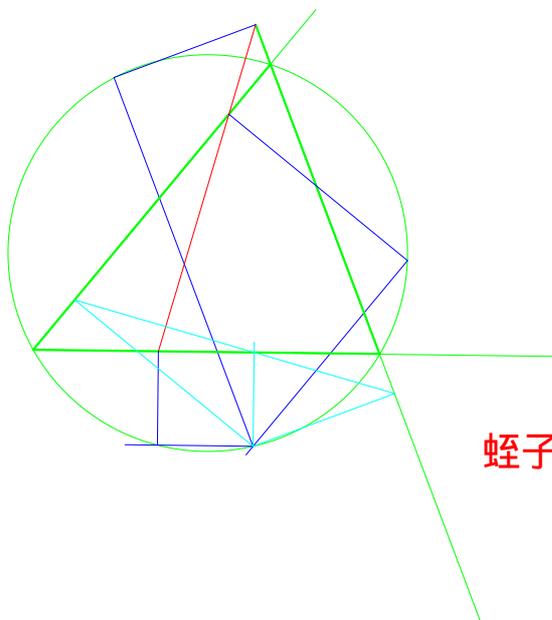
2008-2-2



蛭子井博孝

平行シムソン線の定理

2009-2-3

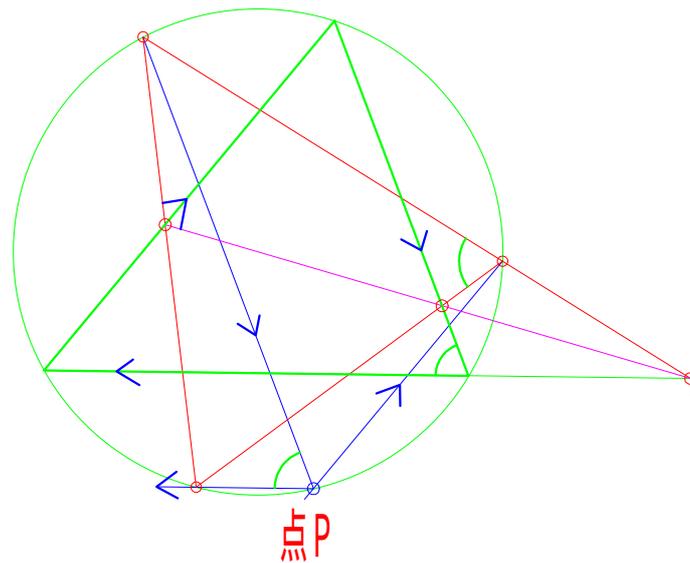


蛭子井博孝

HI-121

2008-2-2

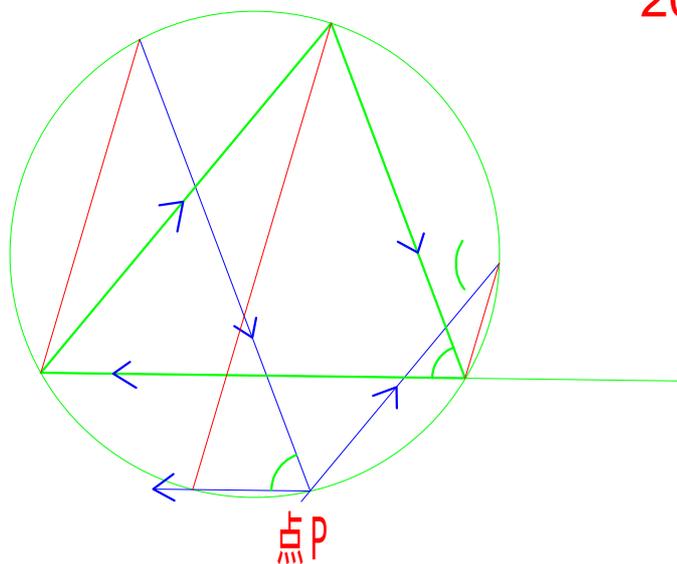
## 点Pに関する三角形の鏡映線の定理



by 蛭子井博孝

## 平行平行線の定理

2009-2-3



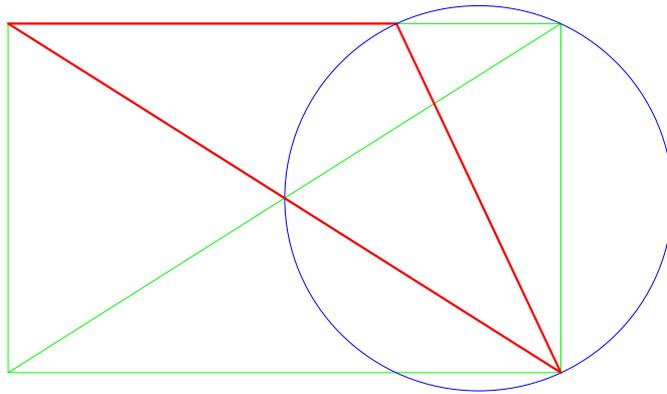
蛭子井博孝

HI-122

2008-2-2

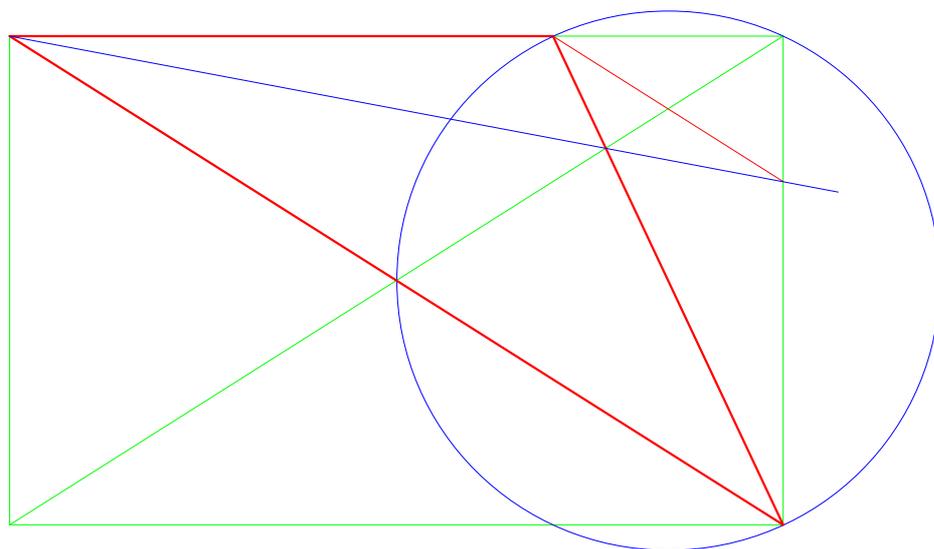
# 長方形の問題

赤三角形が2等辺三角形になることを証明せよ



by 蛭子井博孝

2009-2-3

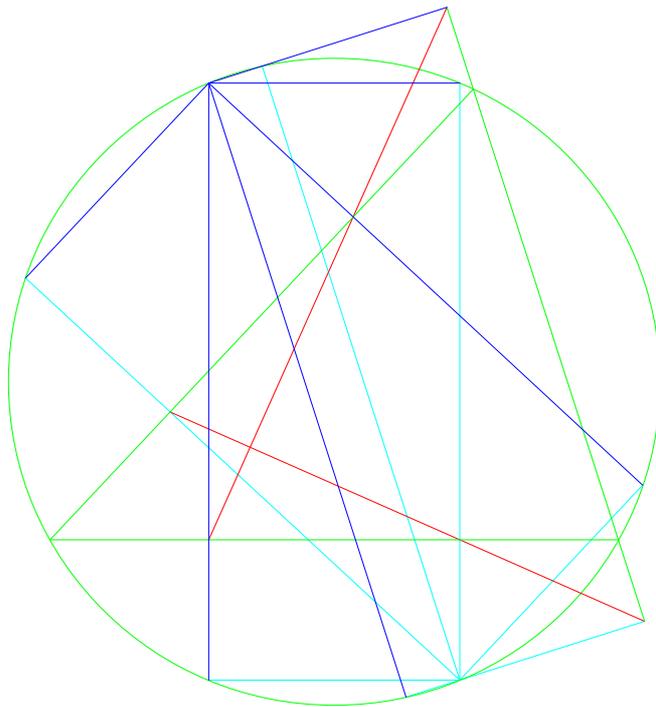


蛭子井博孝

HI-123

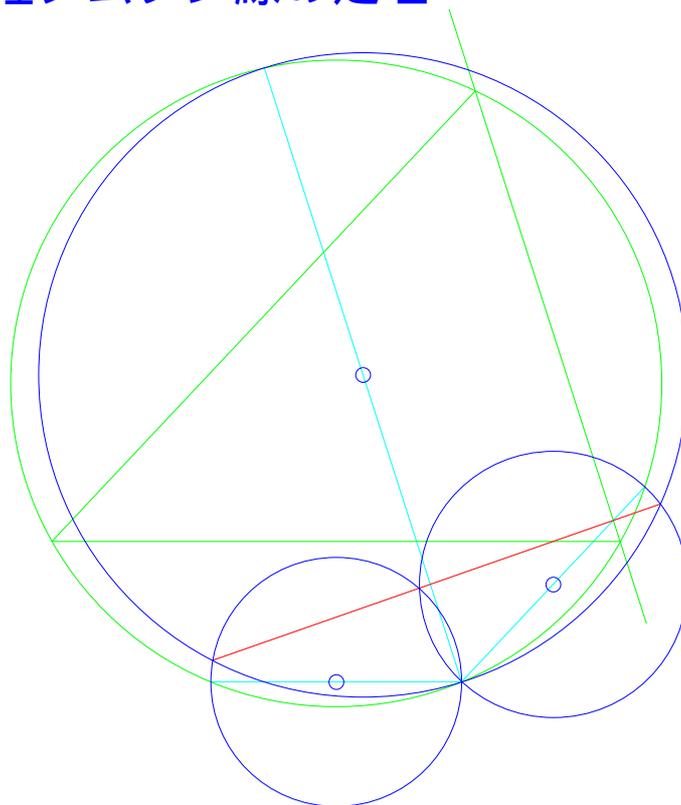
2008-2-3

# シムソン線に関する構図



## 平行直径シムソン線の定理

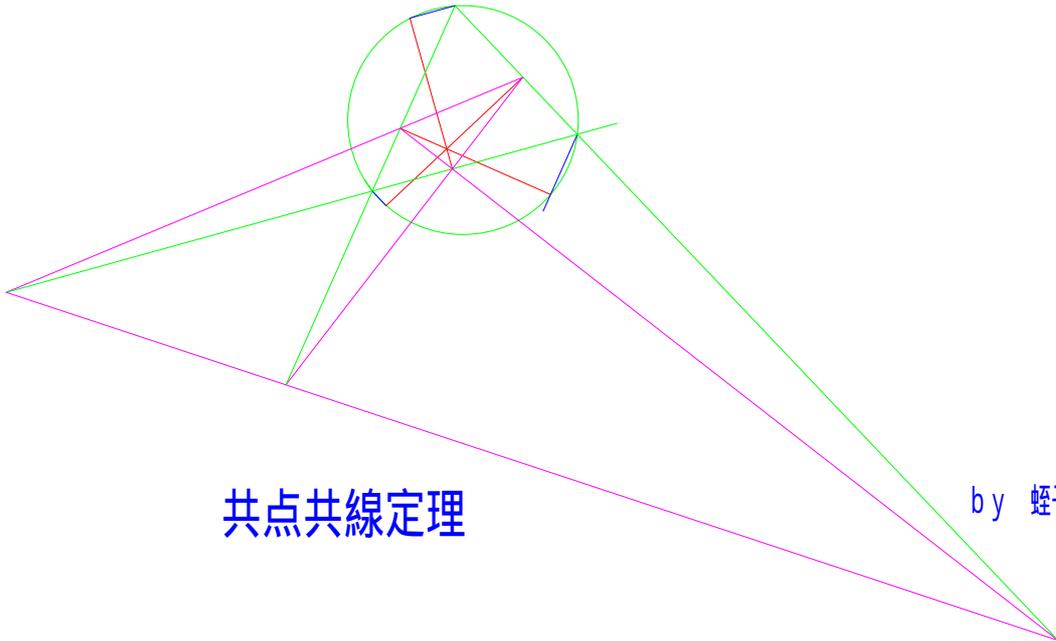
2009-2-3



蛭子井博孝

# 平行共点定理

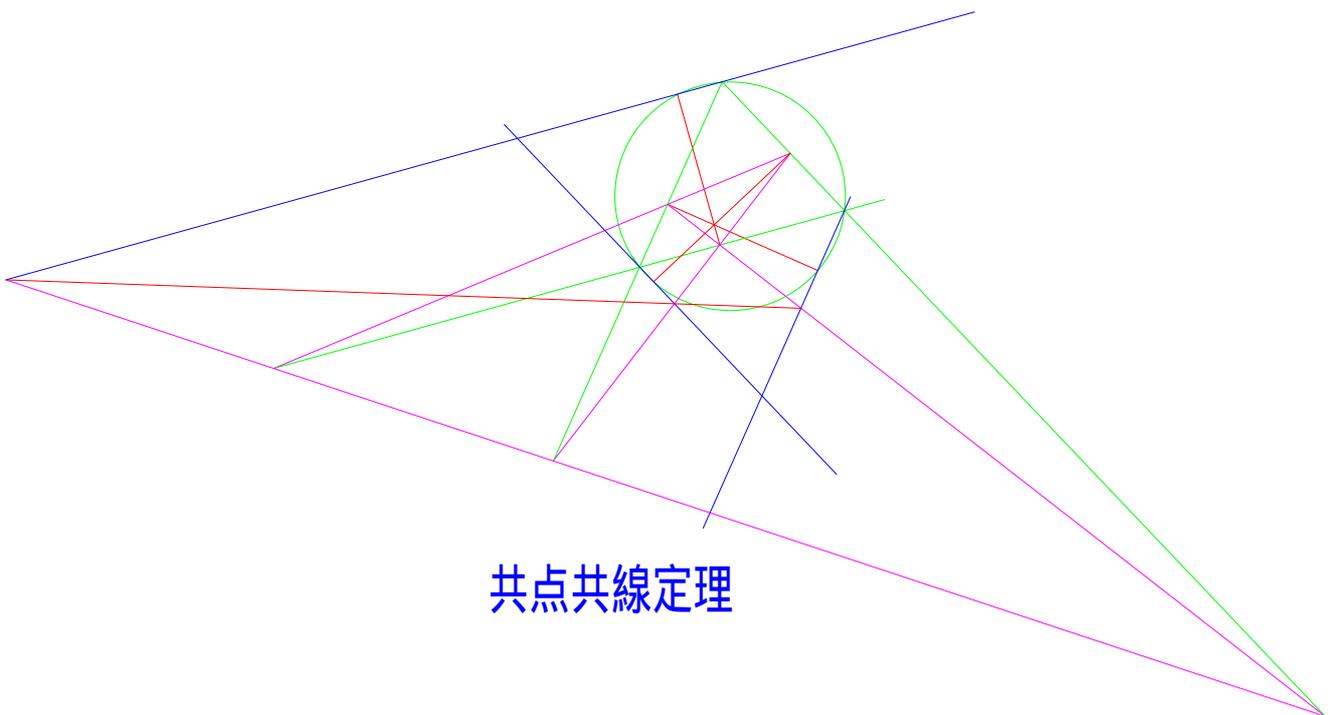
2008-2-3



共点共線定理

by 蛭子井博孝

2009-2-3



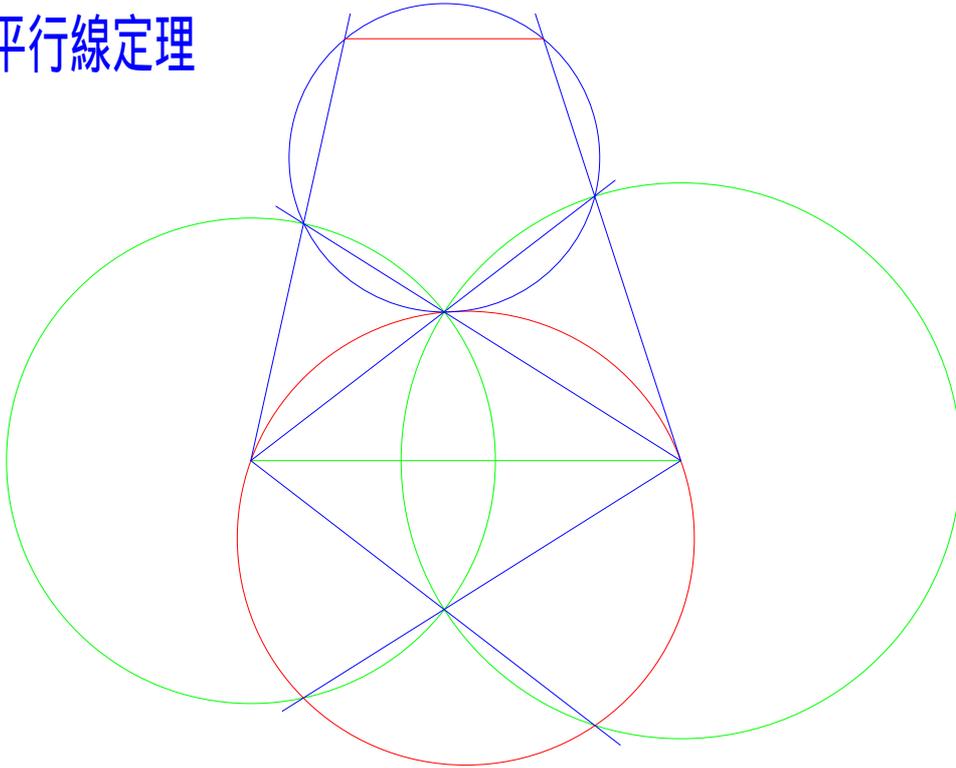
共点共線定理

蛭子井博孝

# 人形の定理

2008-2-4

共円と平行線定理

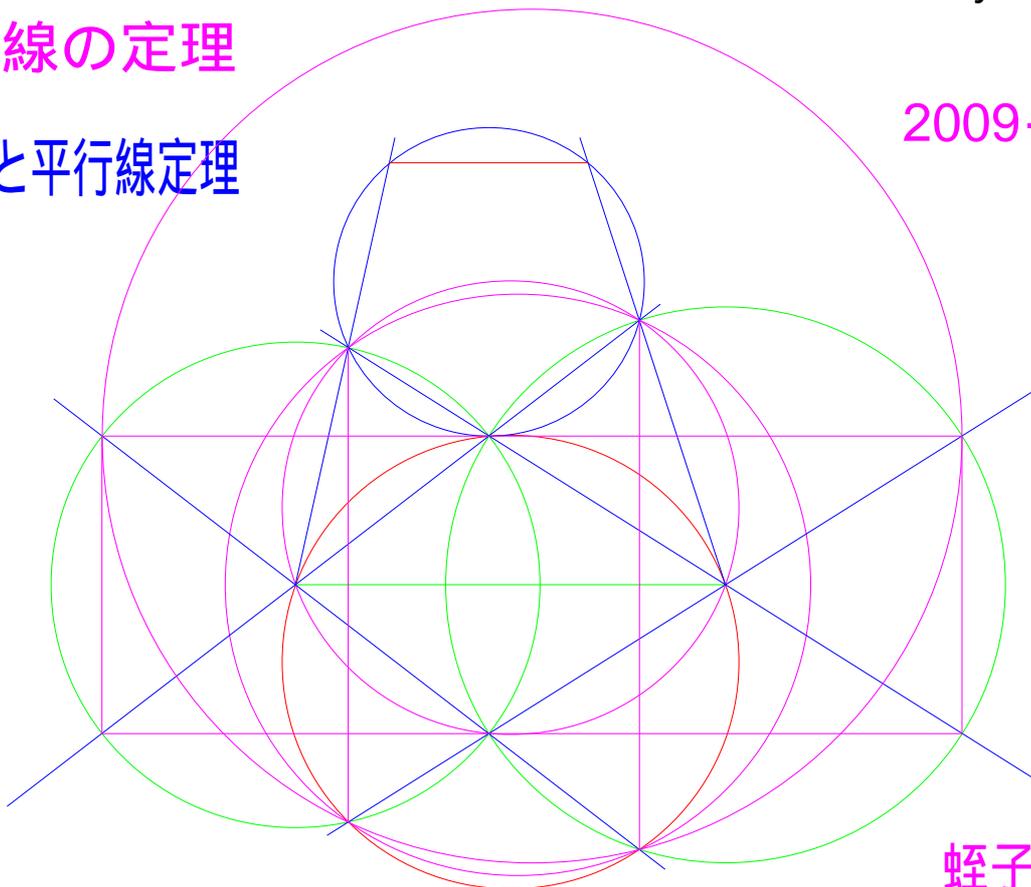


by 蛭子井博孝

中心線の定理

共円と平行線定理

2009-2-4

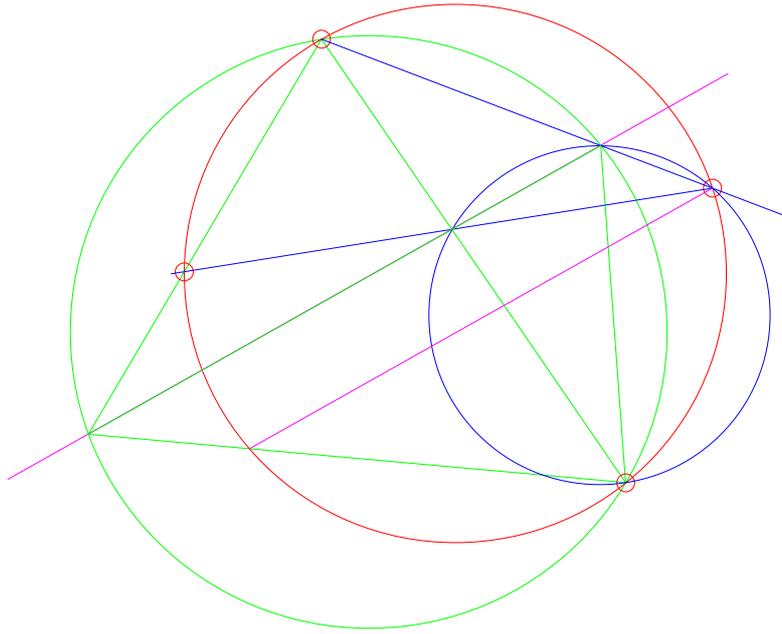


蛭子井博孝

# 中学生でも解ける共円平行問題

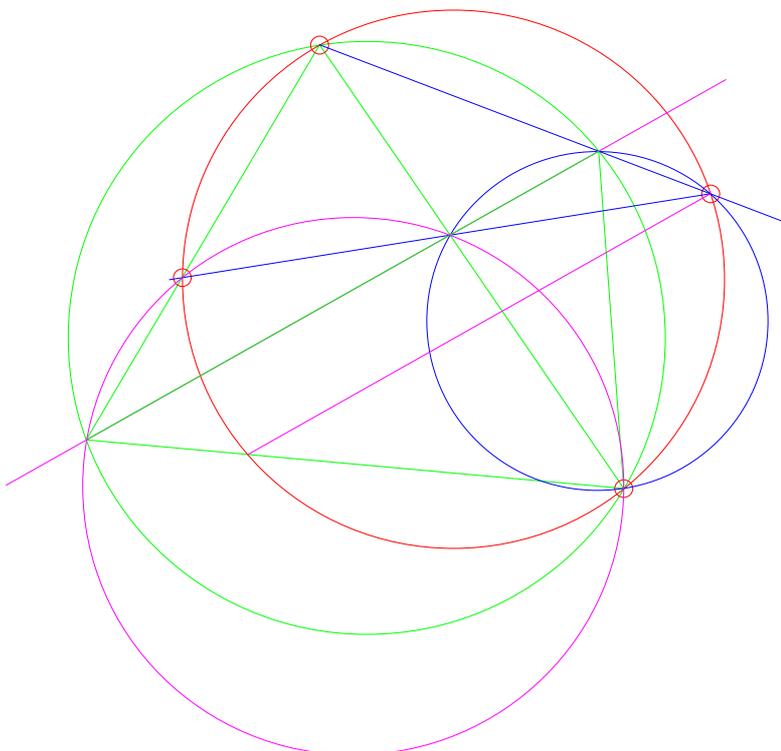
HI-126

2008-2-2



by 蛭子井博孝

2009-2-1



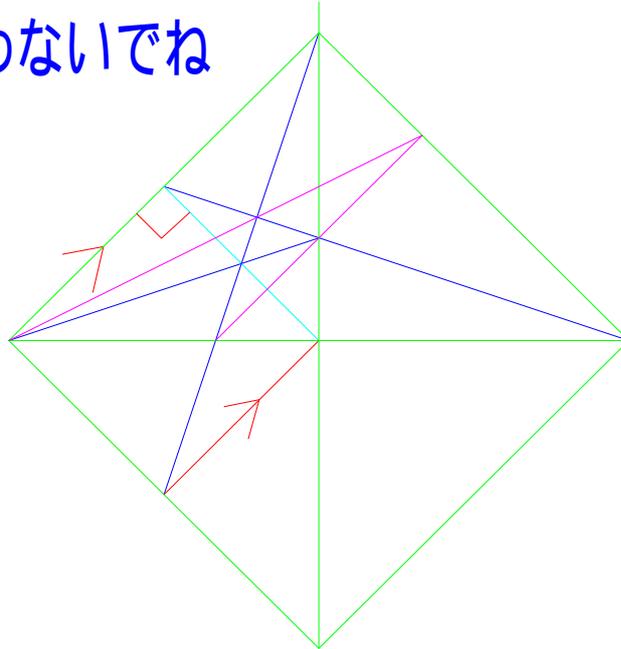
by 蛭子井博孝

HI-127

# 正方形の定理 1

2008-2-4

青線の順番間違わないでね

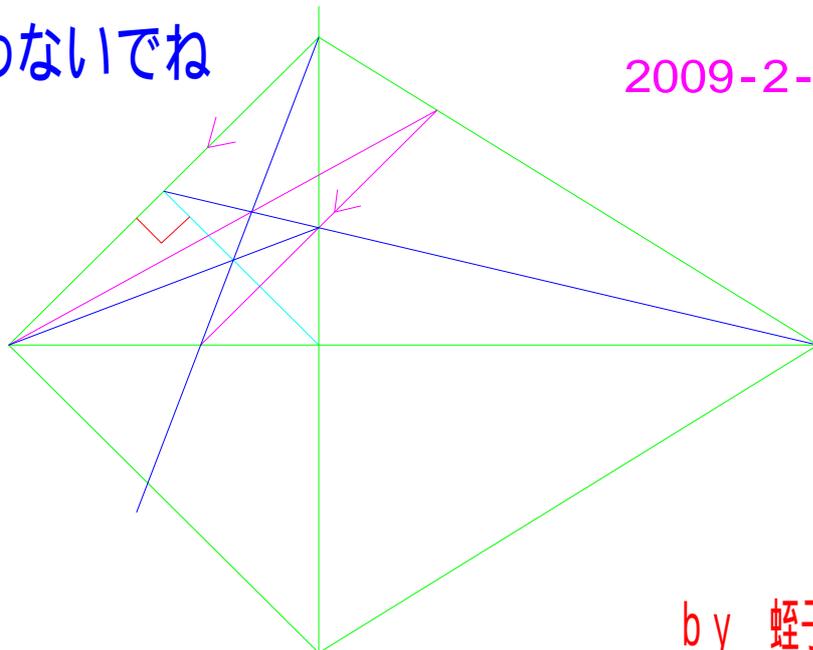


by 蛭子井博孝

マジエンタは、チェバの定理で当たり前

青線の順番間違わないでね

2009-2-4

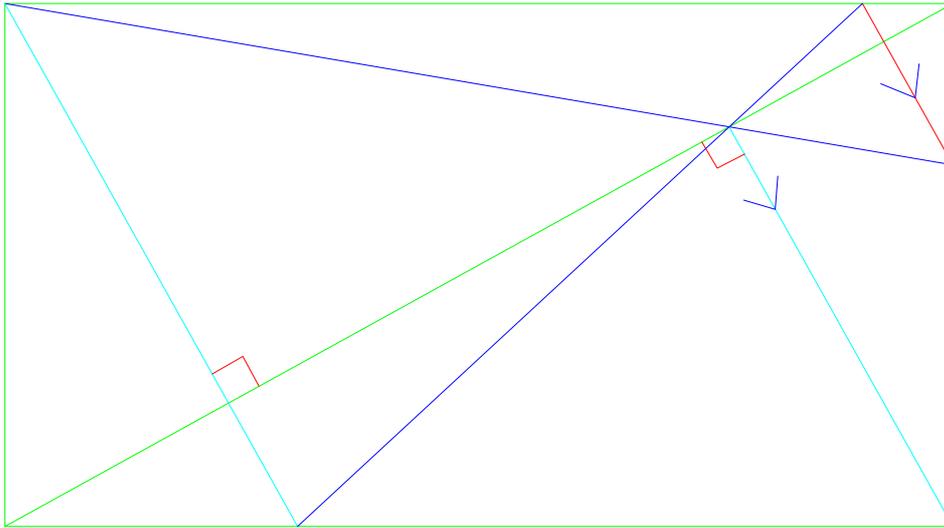


by 蛭子井博孝

HI-128

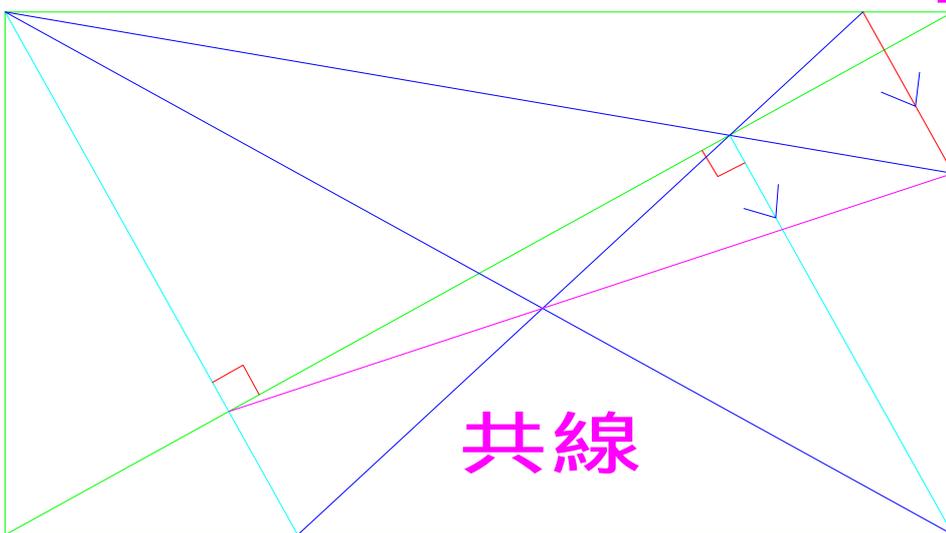
2008-2-4

## 長方形の定理 2



by 蛭子井博孝

2009-2-4

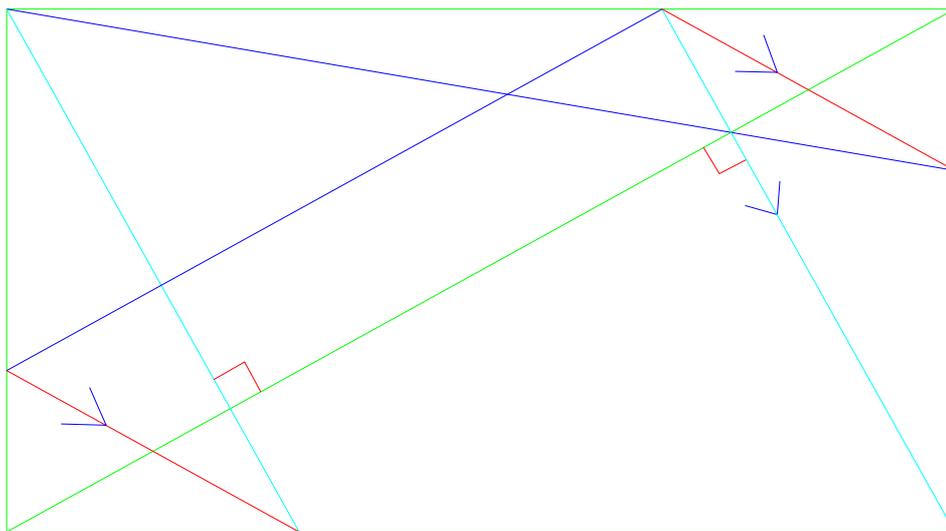


by 蛭子井博孝

HI-129

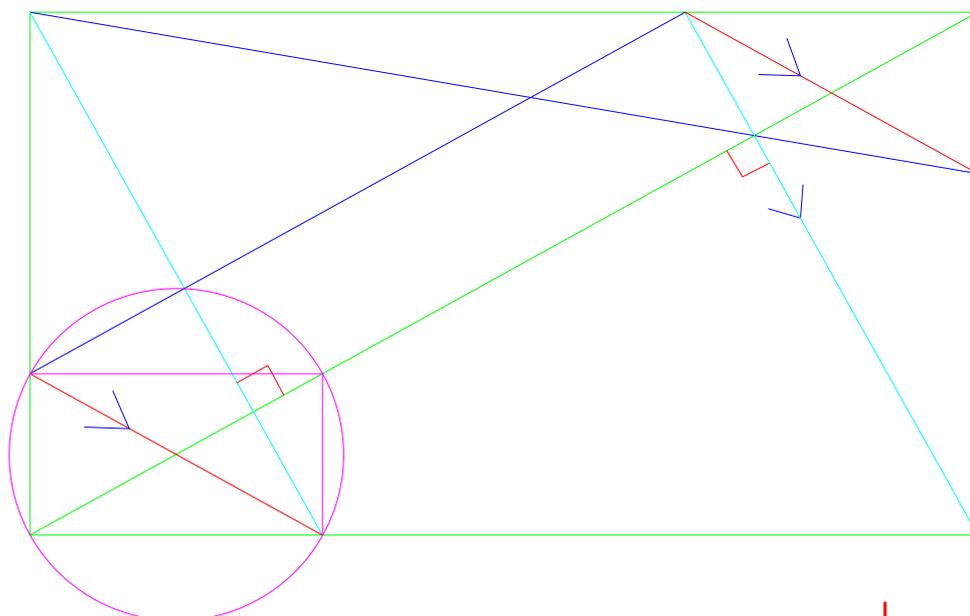
2008-2-4

# 長方形の定理 3



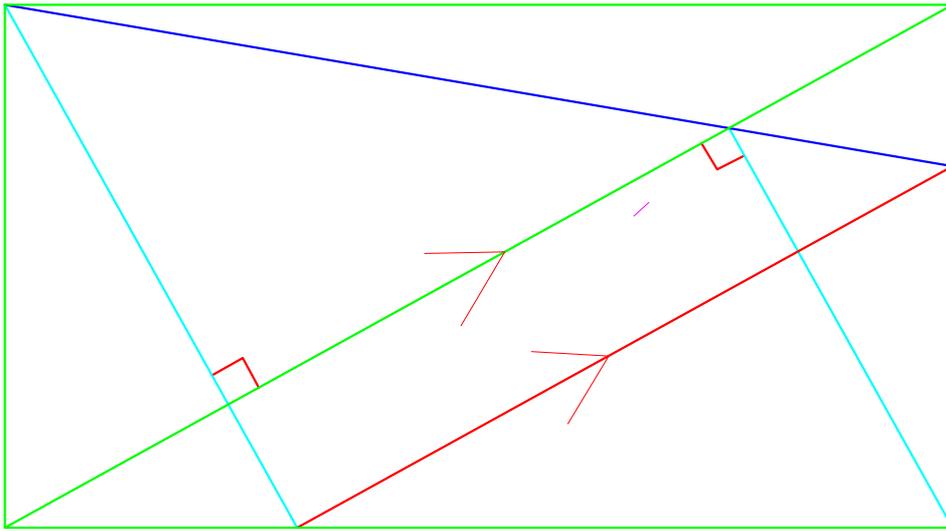
by 蛭子井博孝

2009-2-4



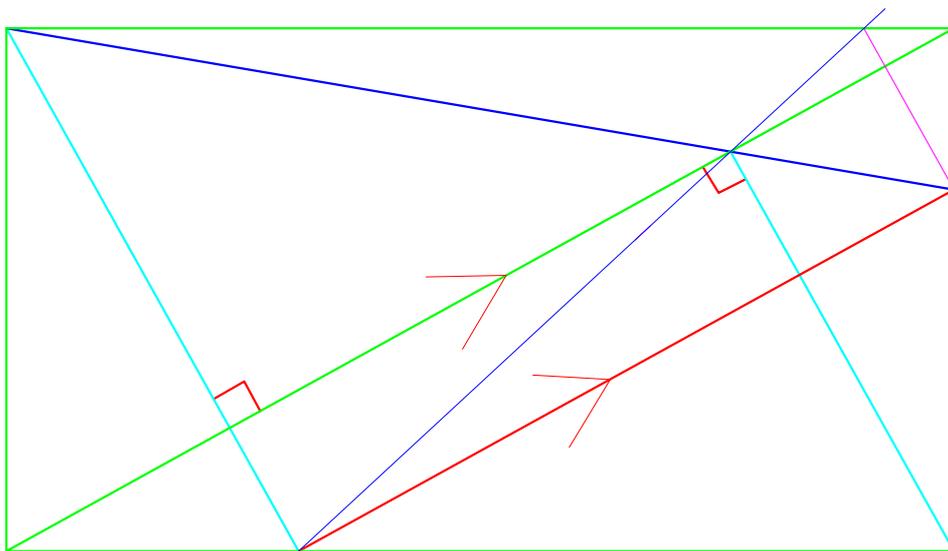
by 蛭子井博孝

# 長方形の定理



by 蛭子井博孝

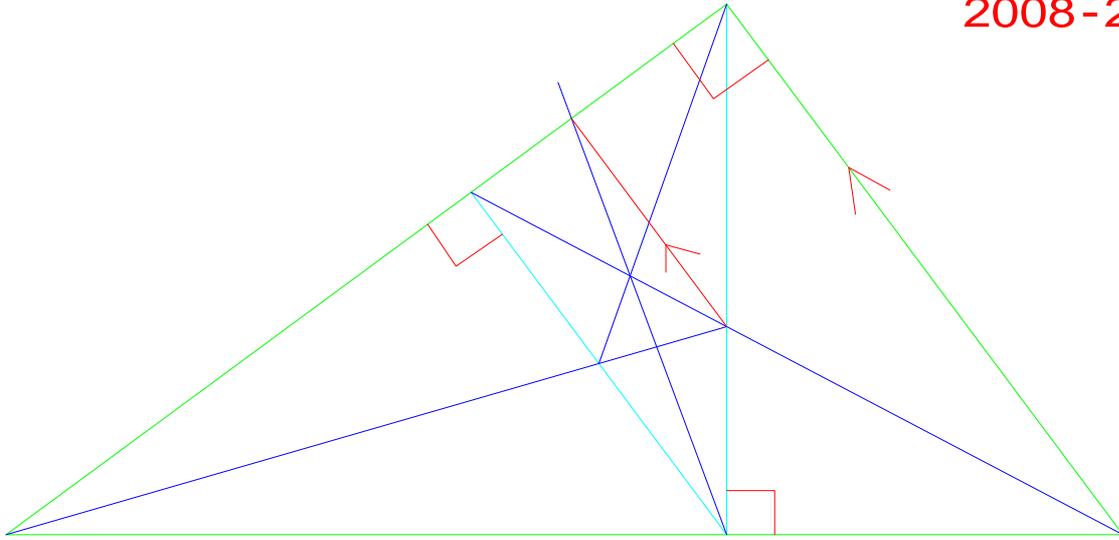
2009-2-4



by 蛭子井博孝

# 直角三角形の平行問題

2008-2-4

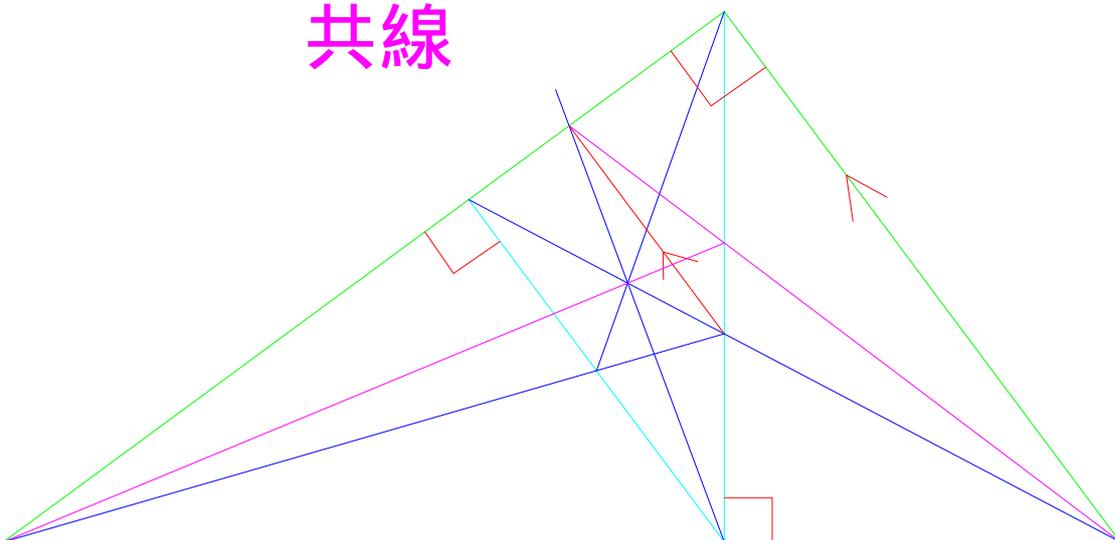


by 蛭子井博孝

青線の順番間違わないでね

2009-2-4

## 共線

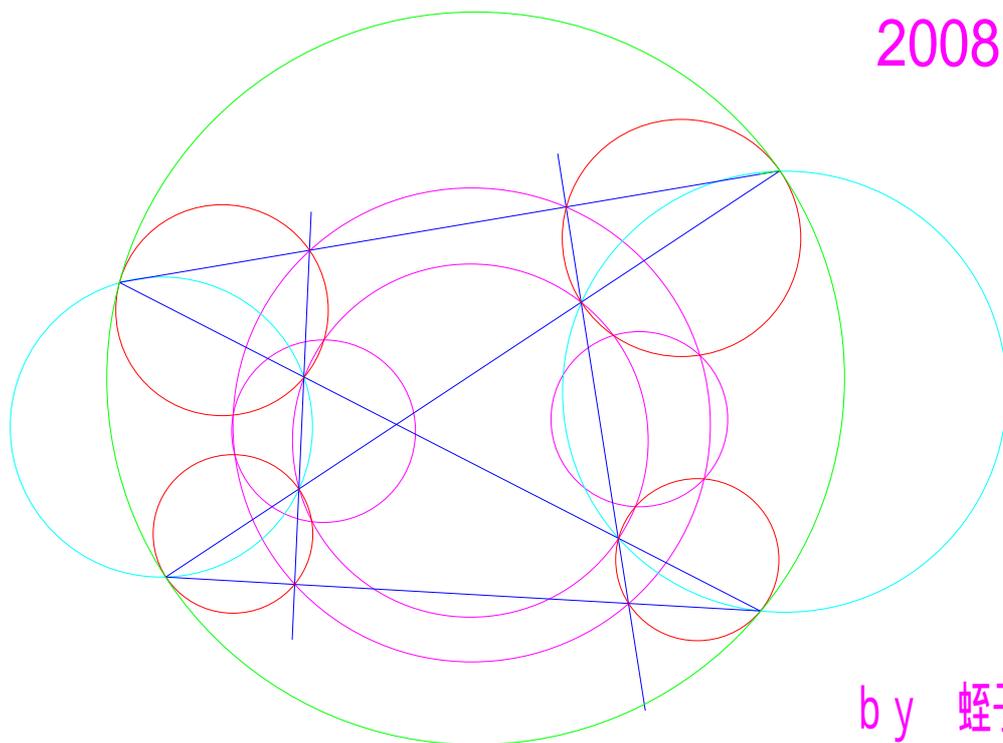


蛭子井博孝

# 3円の4接円と4円

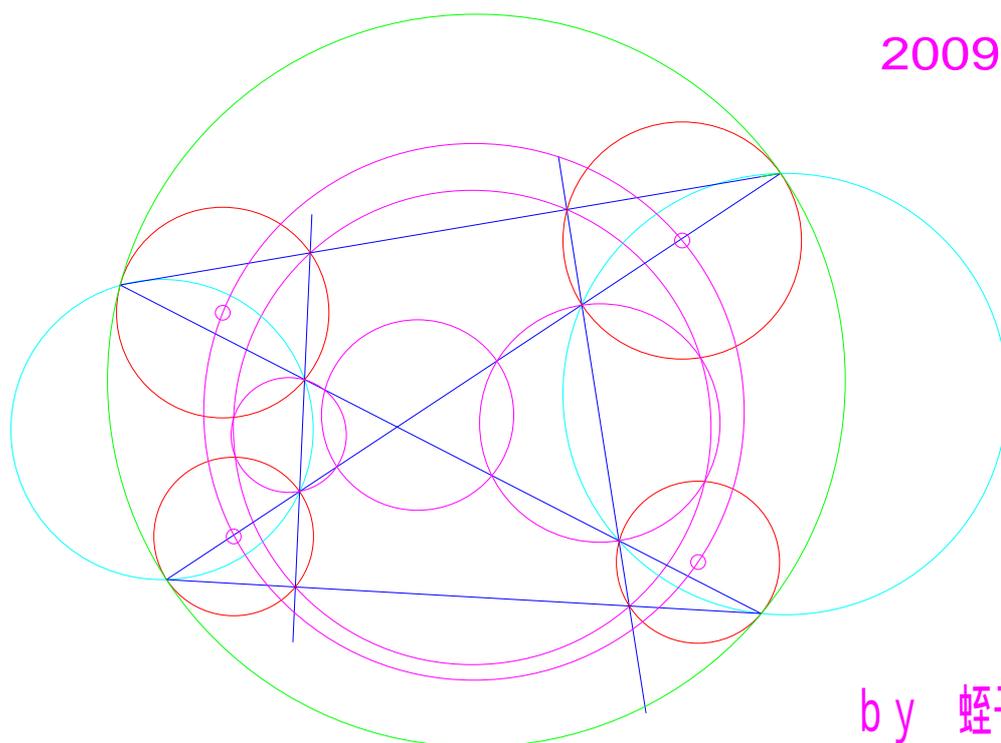
HI-132

2008-2-5



by 蛭子井博孝

2009-2-4

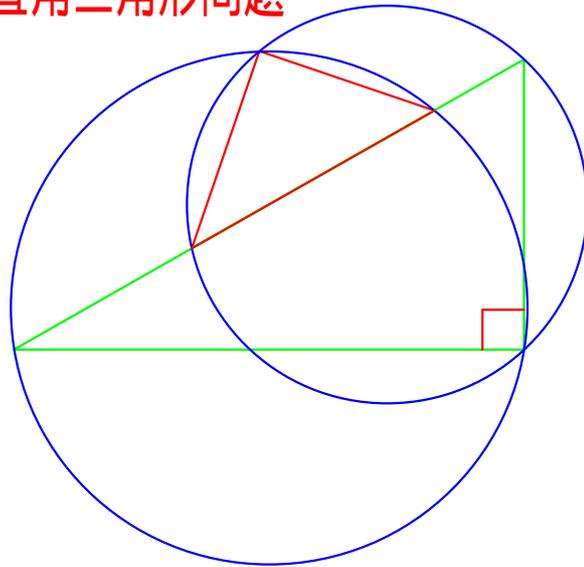


by 蛭子井博孝

HI-133

2008-2-5

### 直角三角形の直角三角形問題

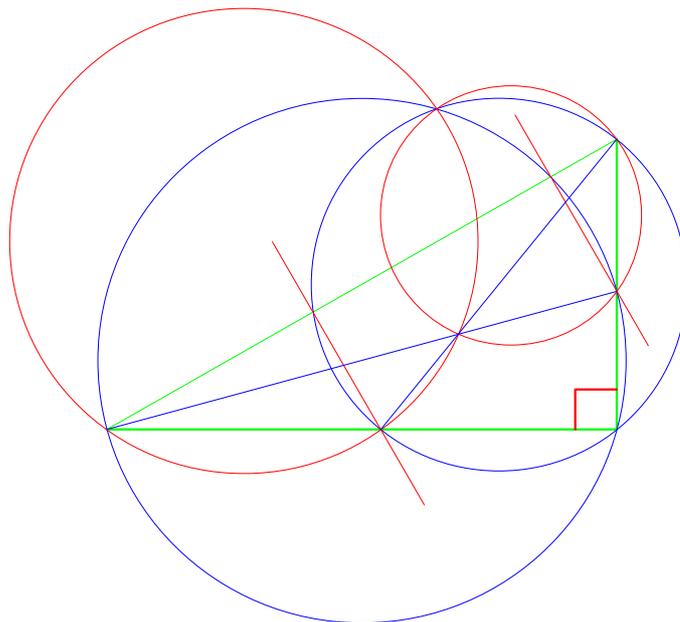


by 蛭子井博孝

ありがとう、気ままな円さん

### 直角三角形の平行線共円問題

2009-2-4

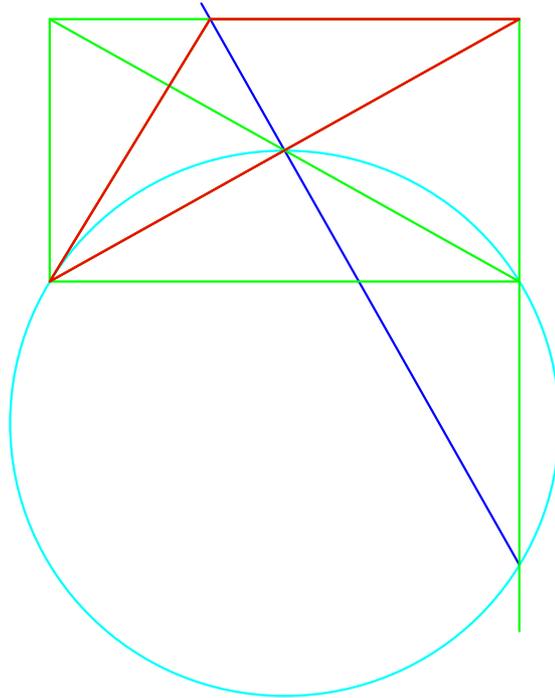


蛭子井博孝

HI-134

2008-2-5

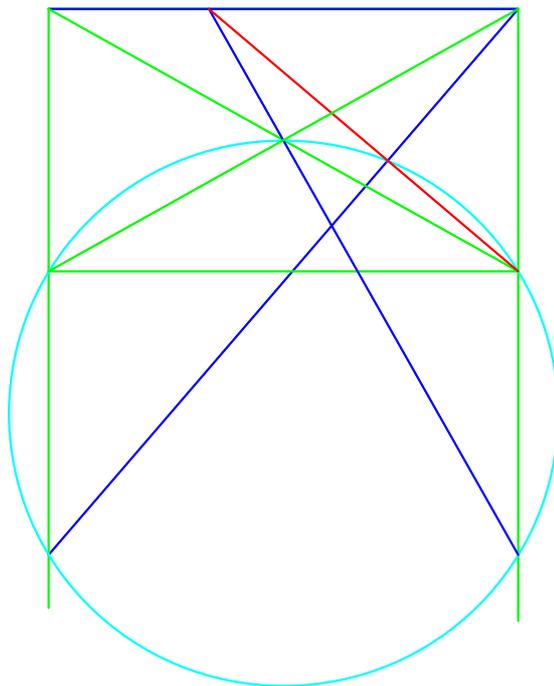
## 長方形の中の2等辺三角形2



by 蛭子井博孝

## 長方形の共線問題

2009-2-4

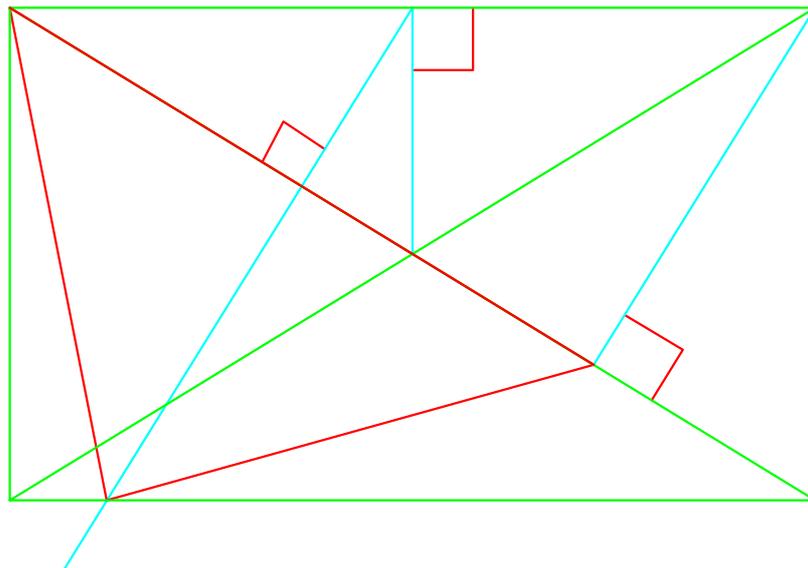


蛭子井博孝

HI-135

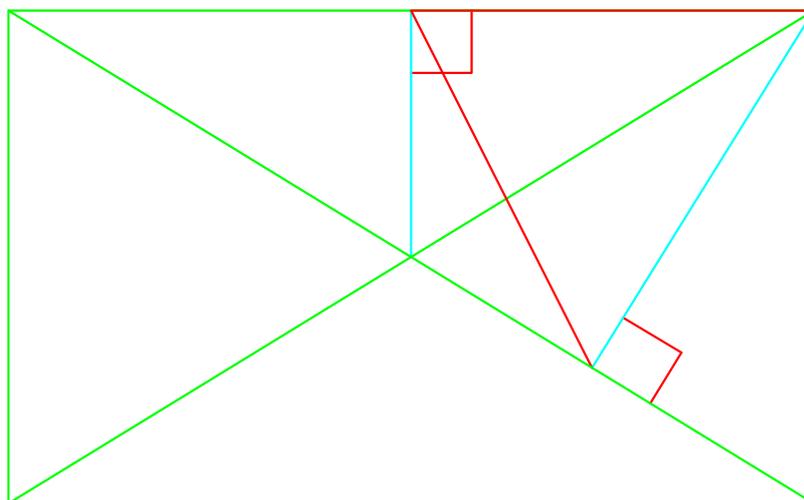
# 長方形の中の2等辺三角形

2008-2-5



by 蛭子井博孝

2009-2-4

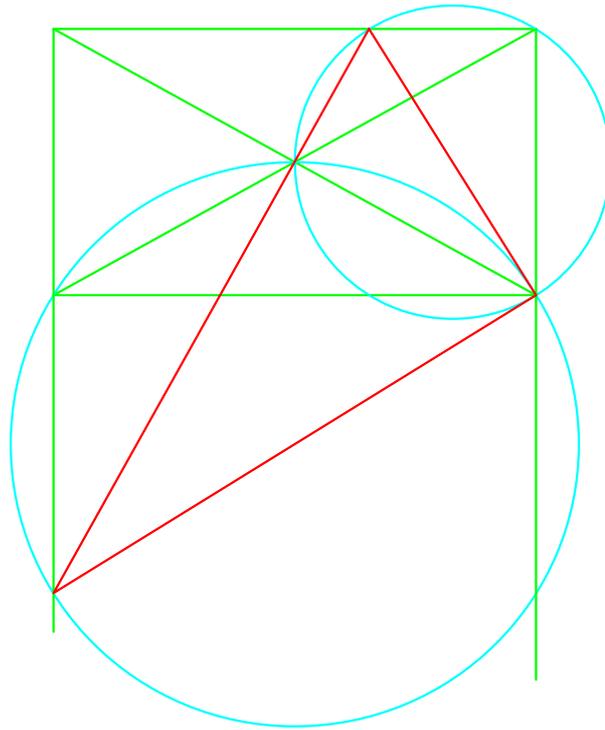


蛭子井博孝

HI-136

# 長方形の直角三角形 1

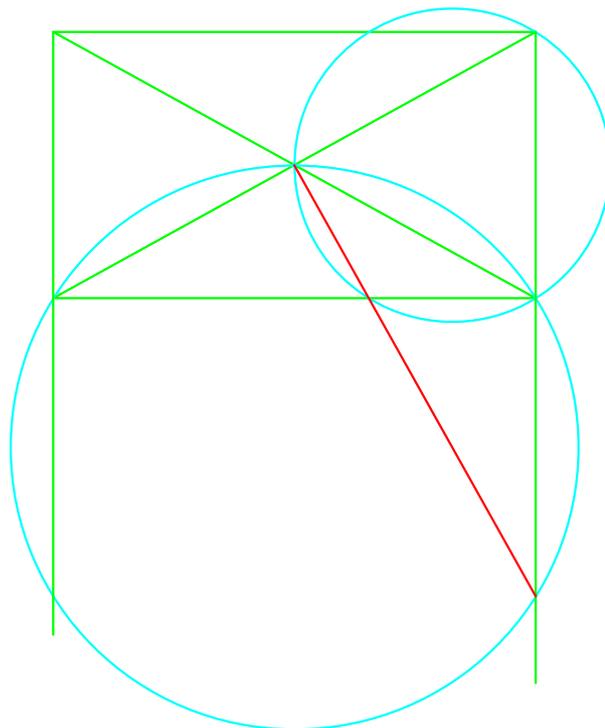
2008-2-5



by 蛭子井博孝

# 長方形の共線問題

2009-2-4

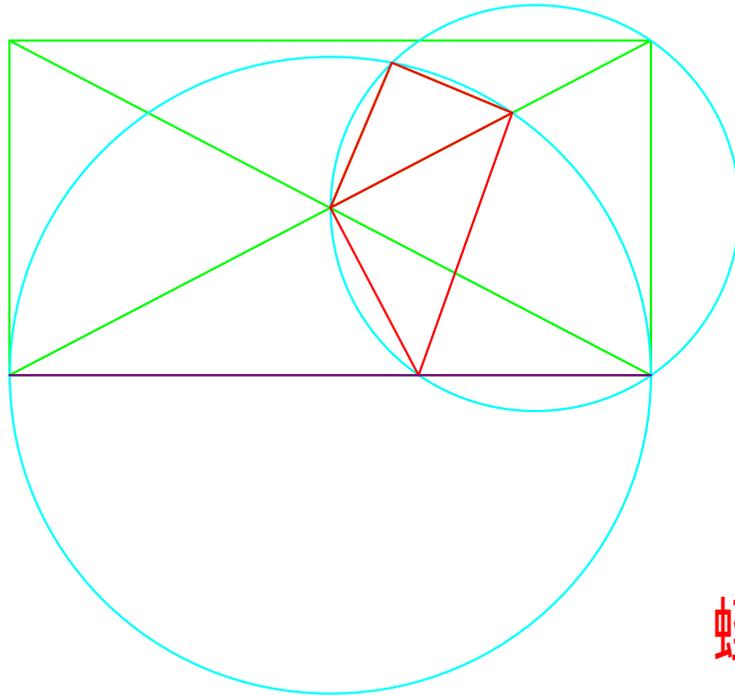


蛭子井博孝

HI-137

# 長方形の直角三角形 2 , 3

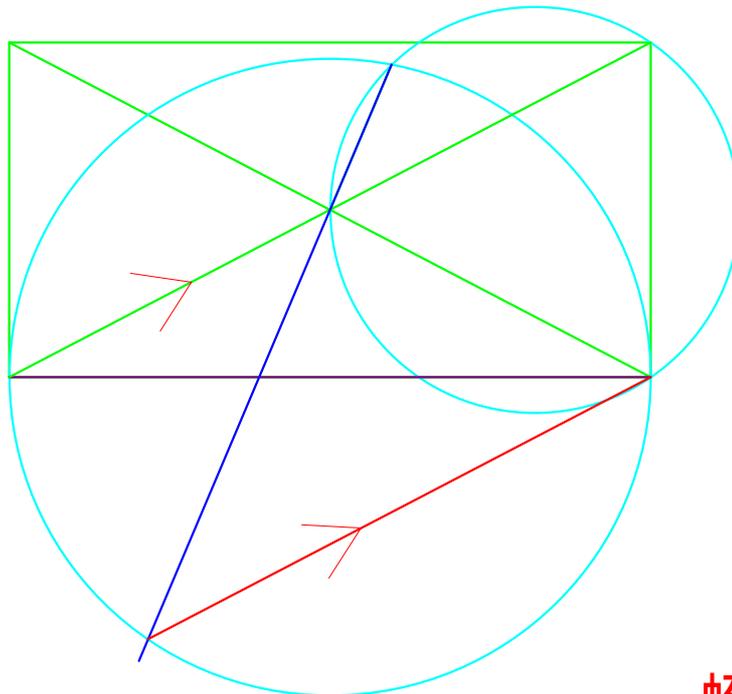
2008-2-5



紫は直径

蛭子井博孝

2009-2-4

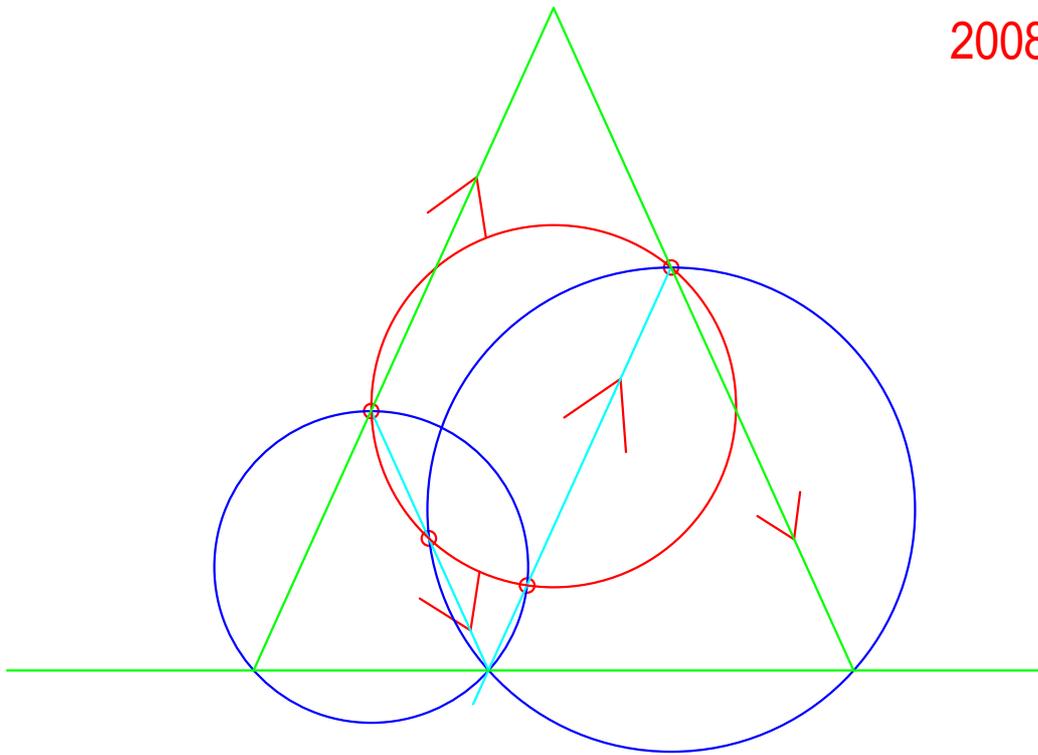


蛭子井博孝

# 2等辺三角形 共円 1

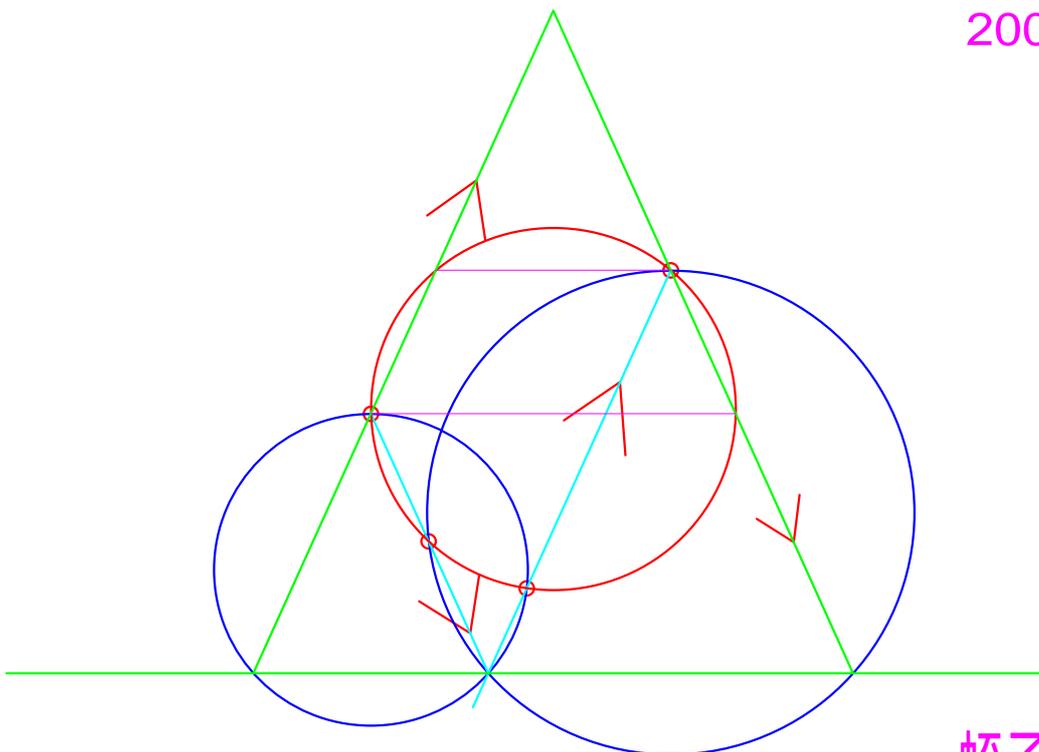
HI-138

2008-2-6



by H.E

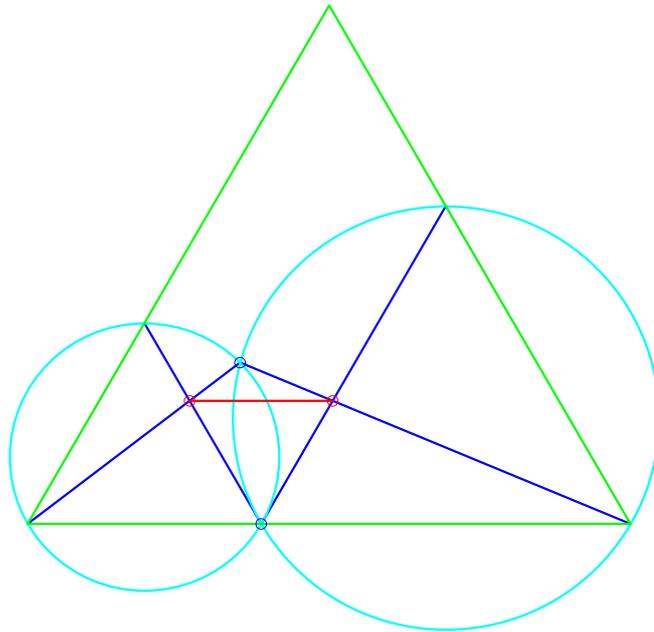
2009-2-4



蛭子井博孝

# 正三角形 平行 1

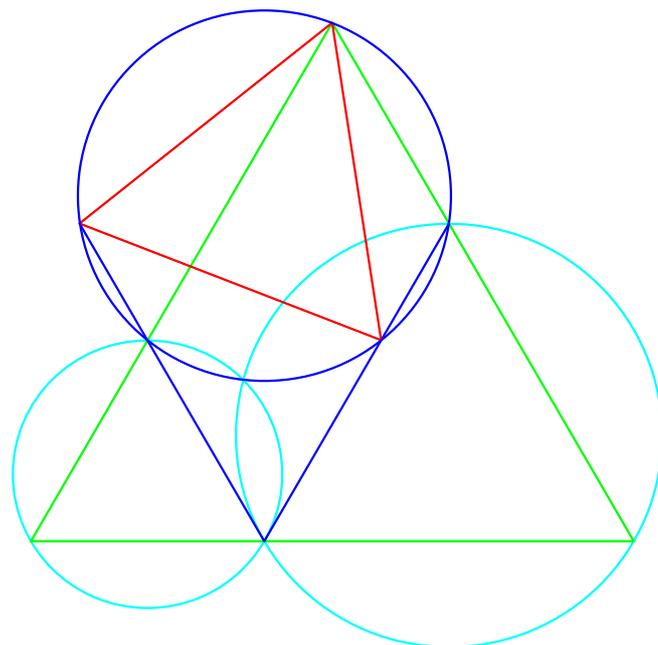
HI-139



2008-2-6

by H.E

# 正三角形から正三角形

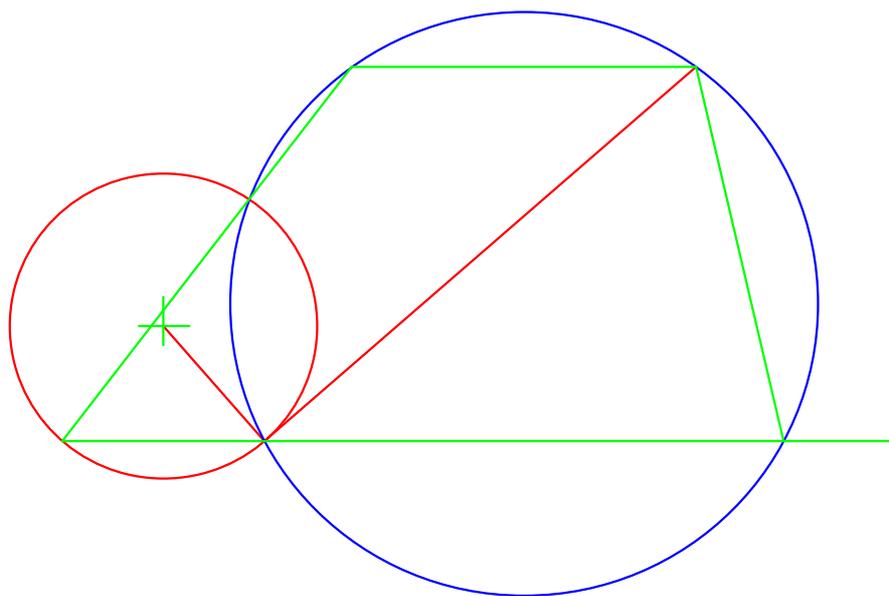


2009-2-4

蛭子井博孝

# 2-6-4 台形 接円 1

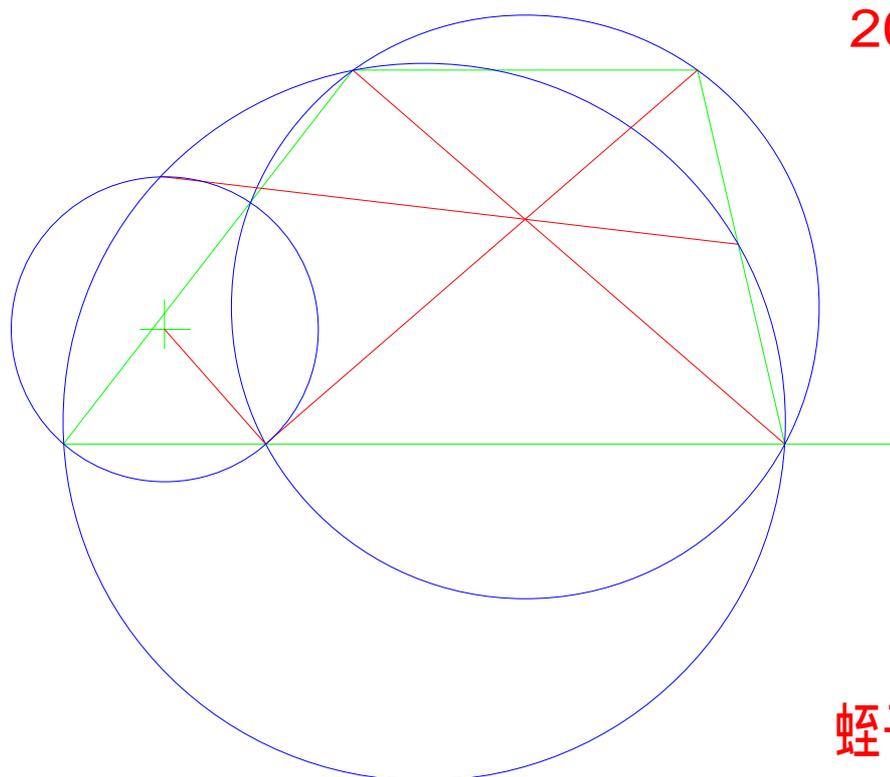
HI-140



2008-2-6  
by H.E

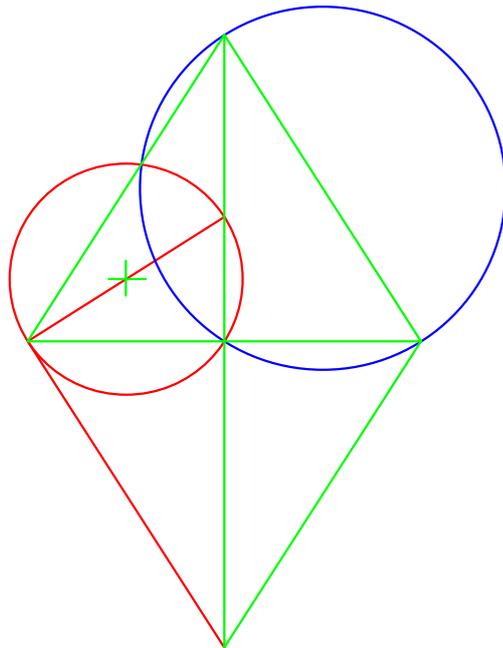
共点

2009-2-4



蛭子井博孝

2-6-5 菱形 接円 1

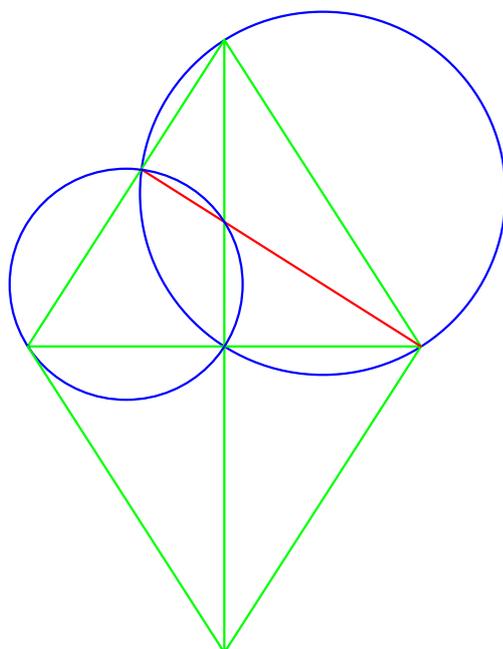


2008-2-6

by H.E

共線

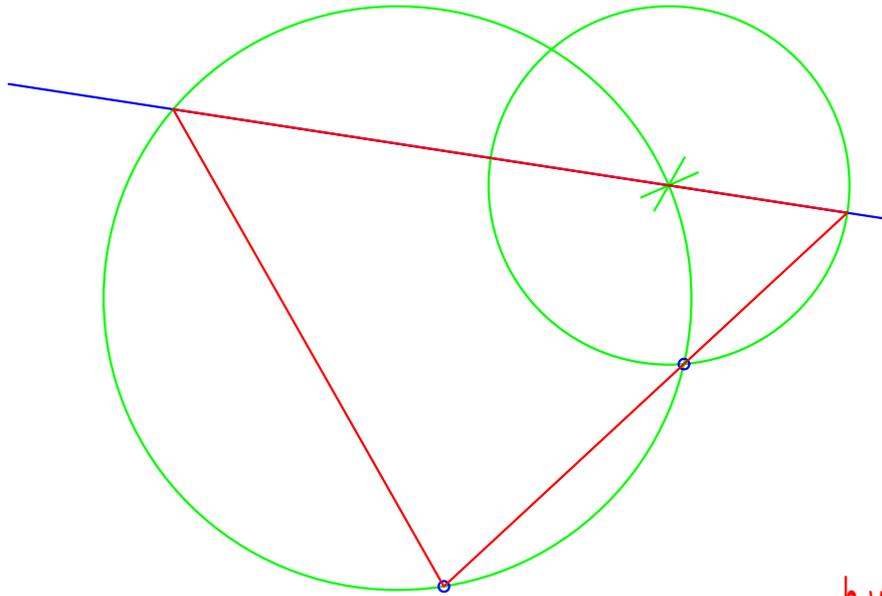
2009-2-4



蛭子井博孝

# 2円の2等辺三角形問題3

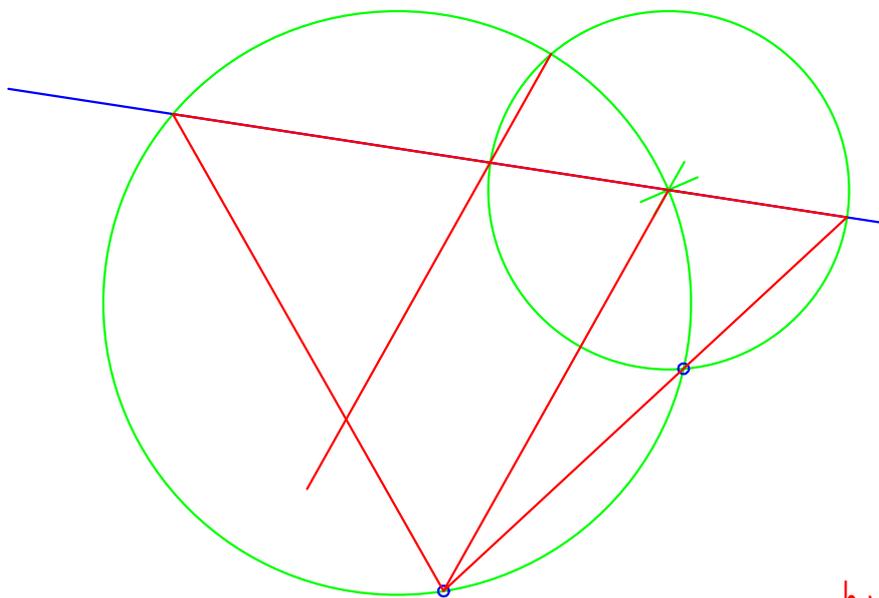
HI-142  
2008-2-6



by H.E

平行

2009-2-4

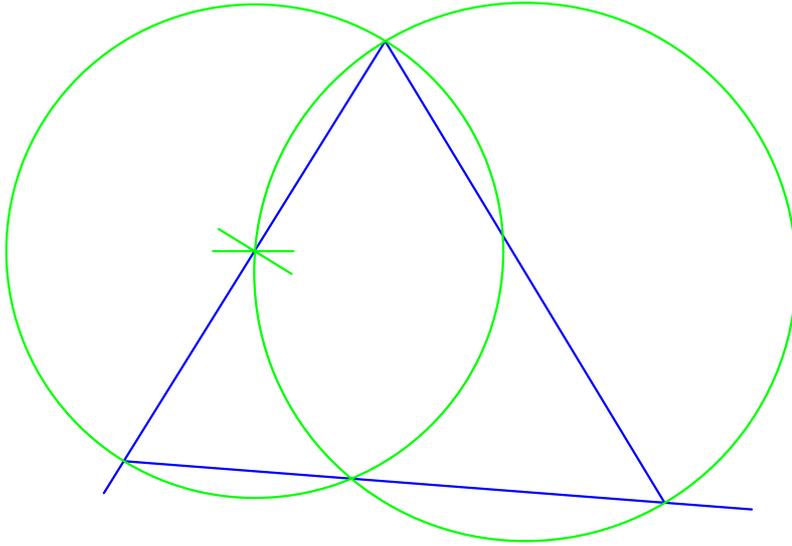


by H.E

HI-143

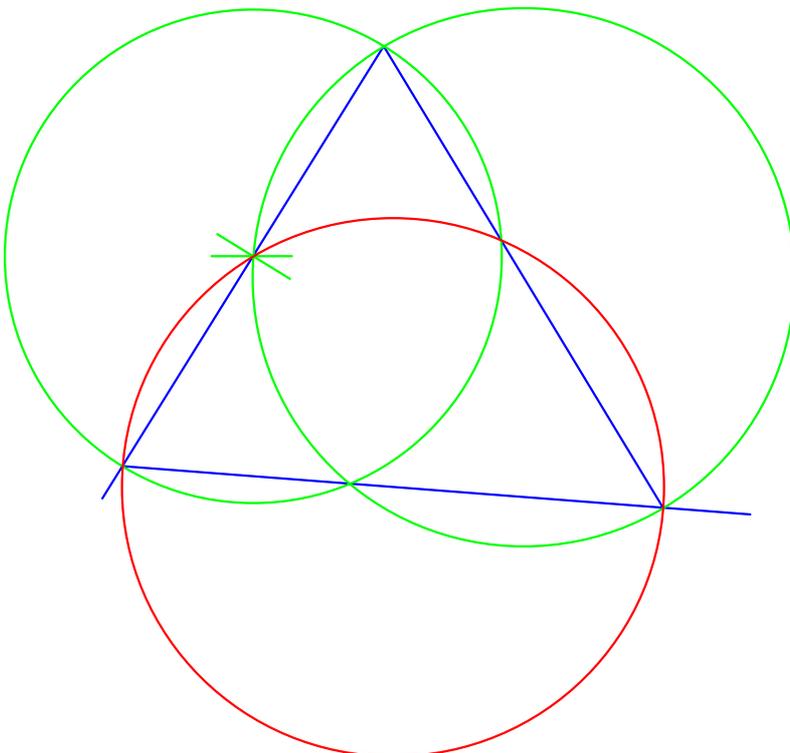
# 2円の2等辺三角形問題

2008-2-6



by H.E

2009-2-4

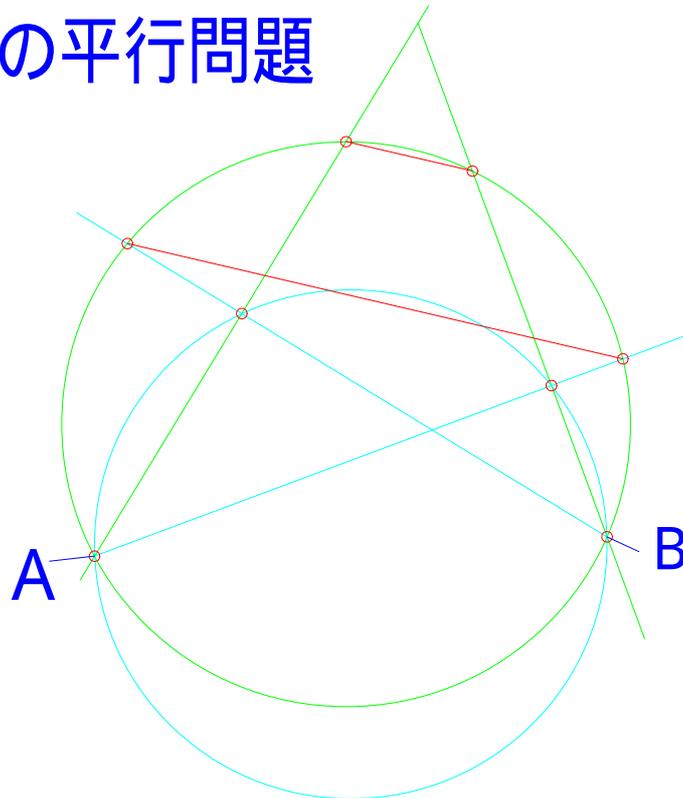


蛭子井博孝

HI-144

# 円と2直線の平行問題

2008-2-6

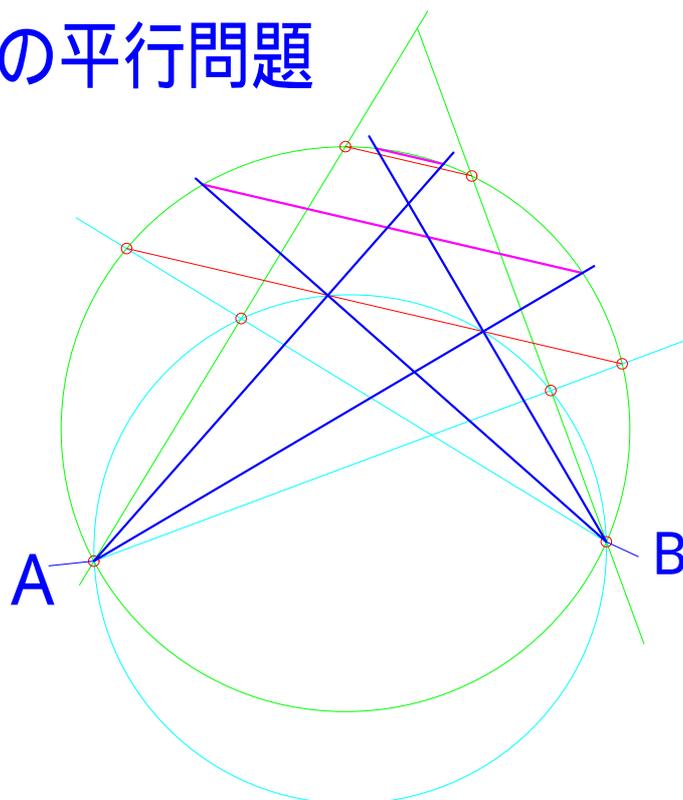


by H.E

水色円は、A, Bを通る任意な円

# 円と2直線の平行問題

2009-2-4

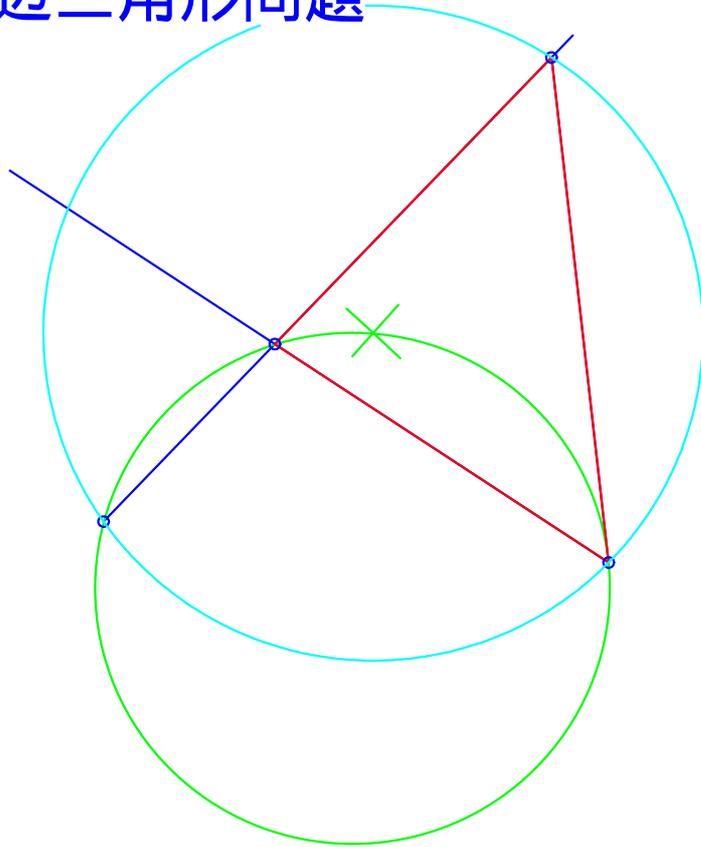


蛭子井博孝

# 2円の2等辺三角形問題

HI-145

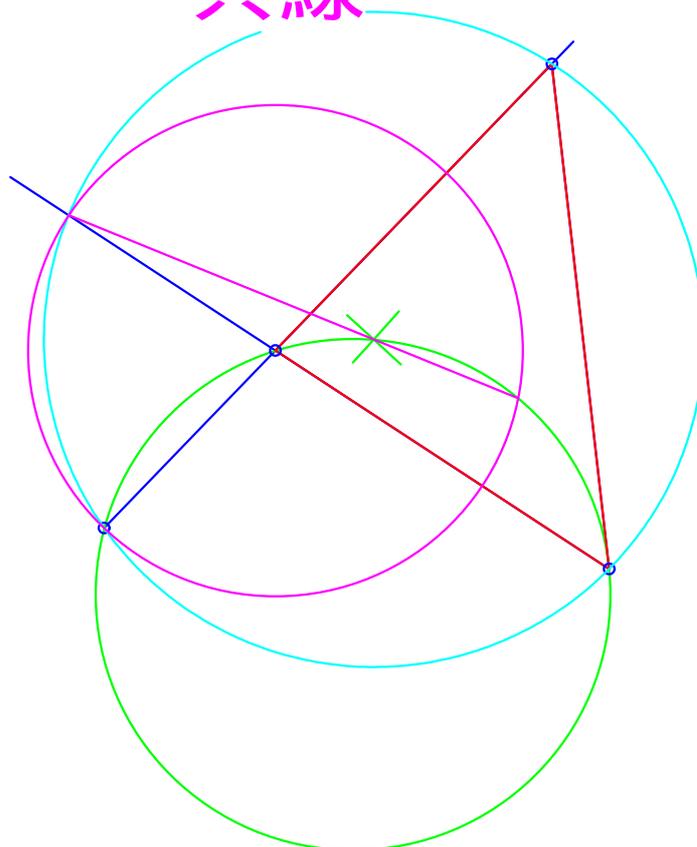
2008-2-6



by H.E

# 共線

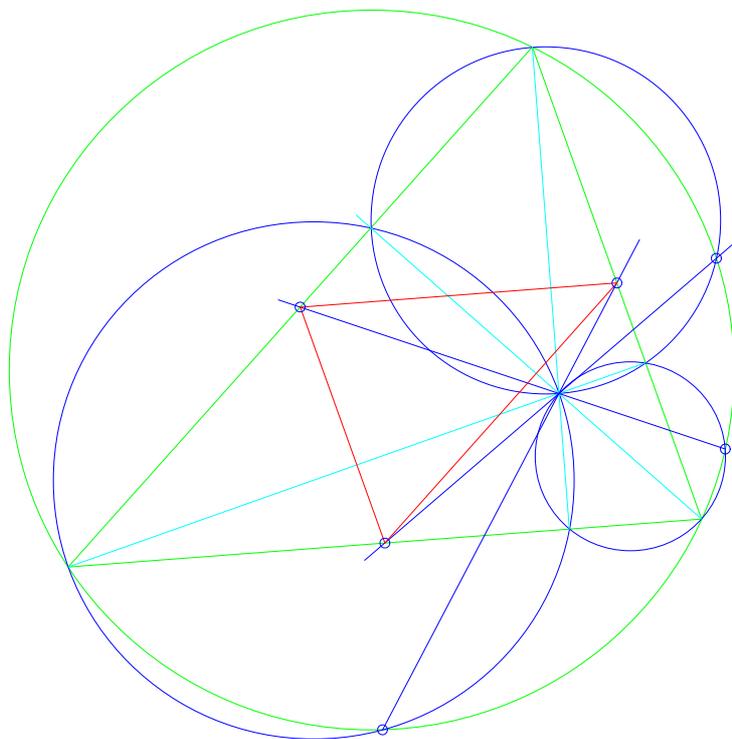
2009-2-4



蛭子井博孝

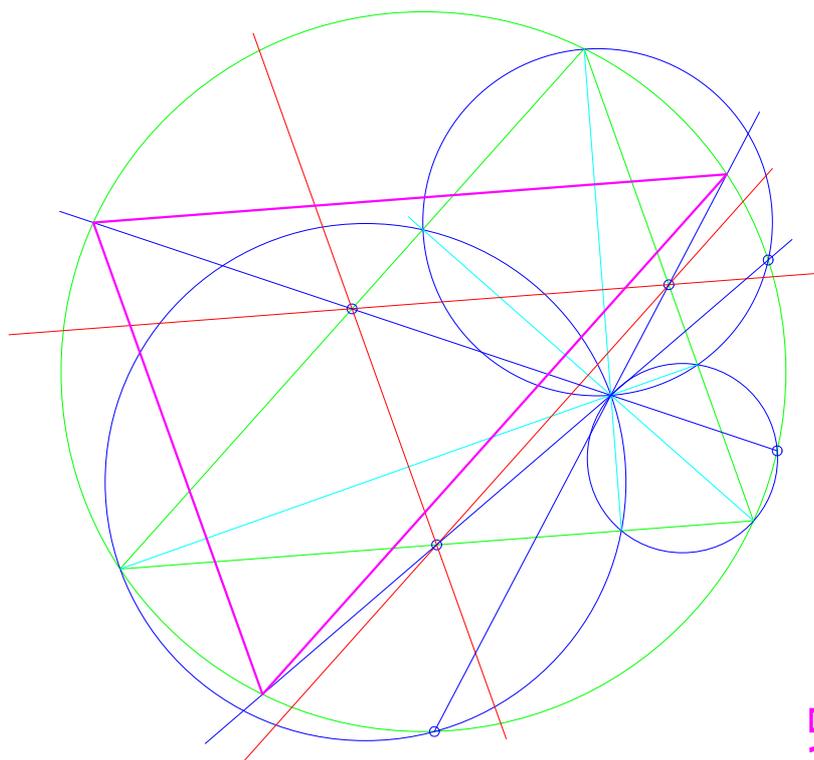
# 垂心より作った3円と外接円の交点の性質

HI-146



2008-2-6

by H.E

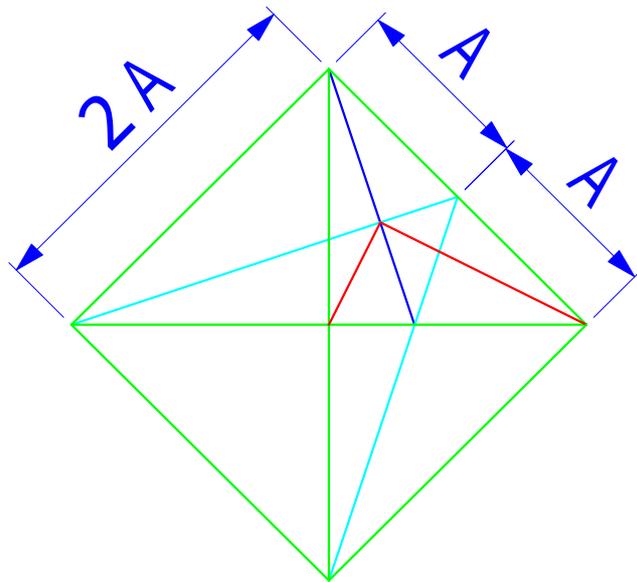


2009-2-4

蛭子井博孝

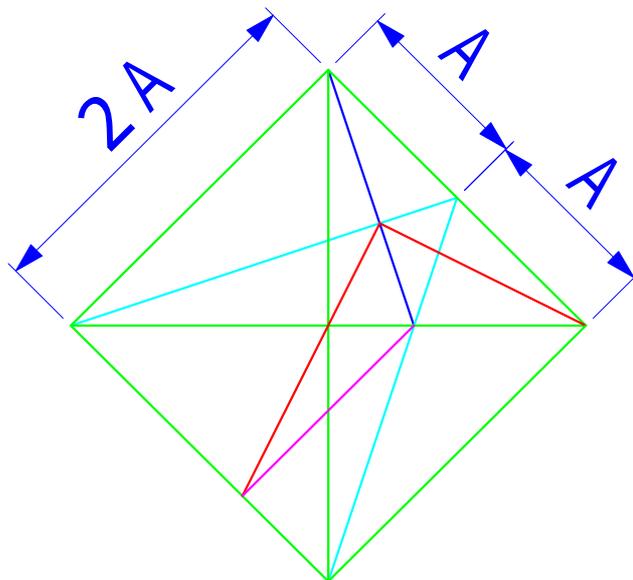
HI-147

正方形の直交問題(赤線は直交する)



2008-2-6  
by H.E

2009-2-4

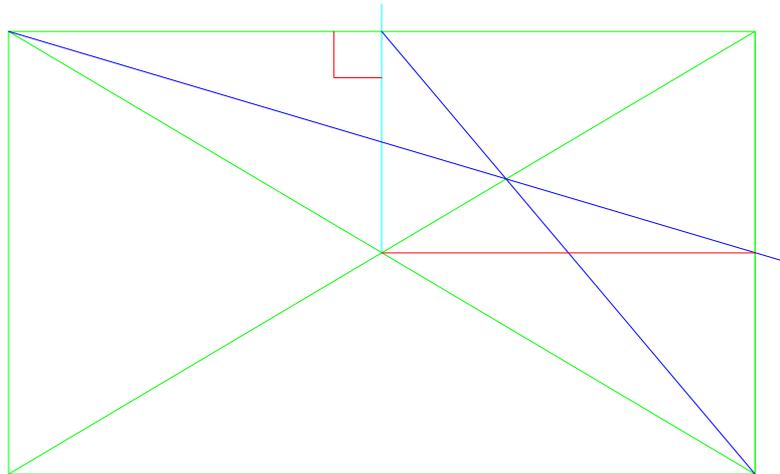


蛭子井博孝

HI-148

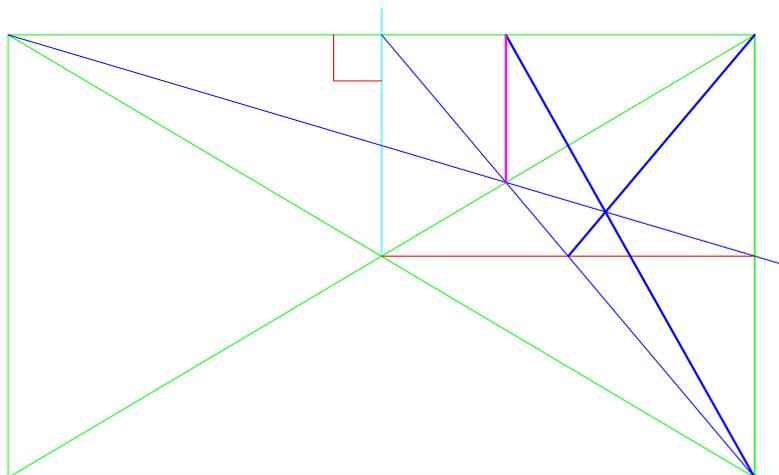
# 長方形の平行問題

2008-2-6



by H.E

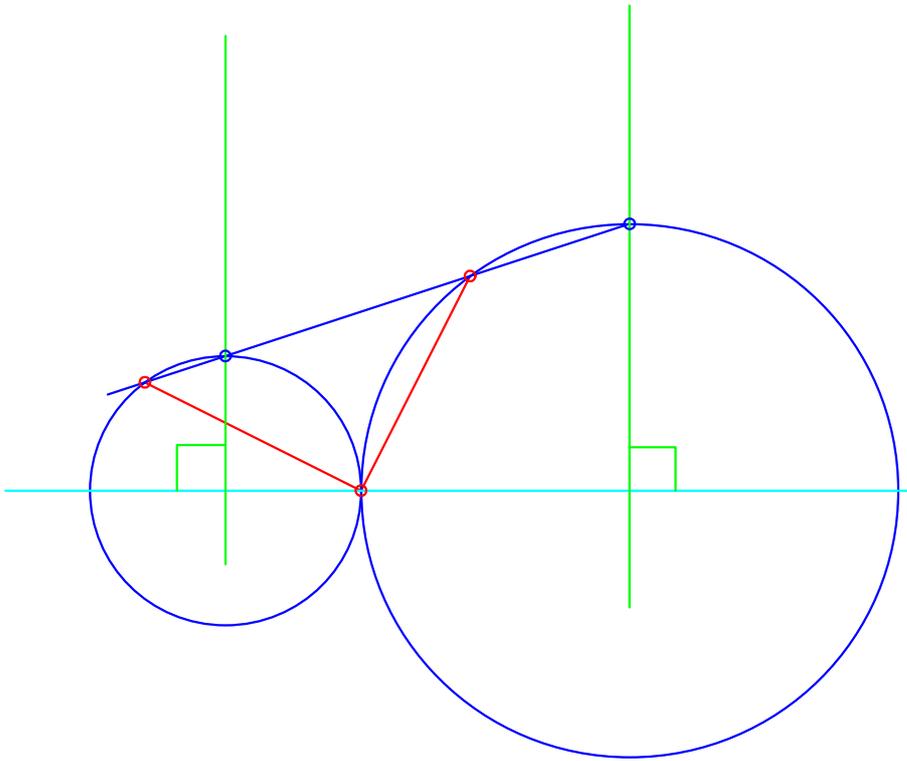
2009-2-4



by H.E

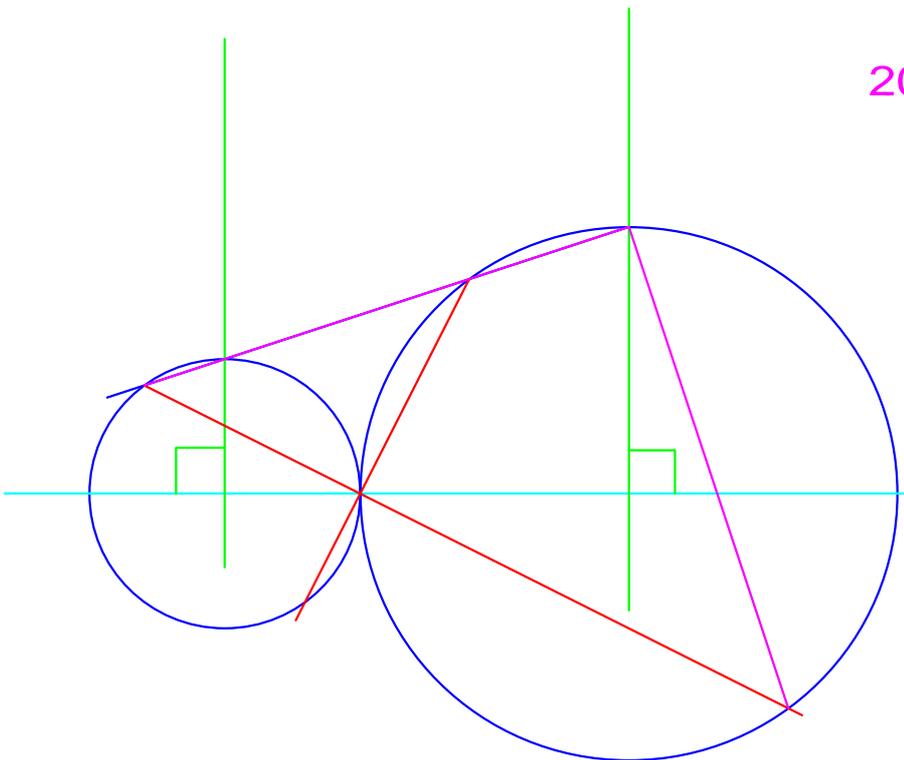
# 2-7-1 平行線 直角2等辺三角形

HI-149



2008-2-7

by H.E



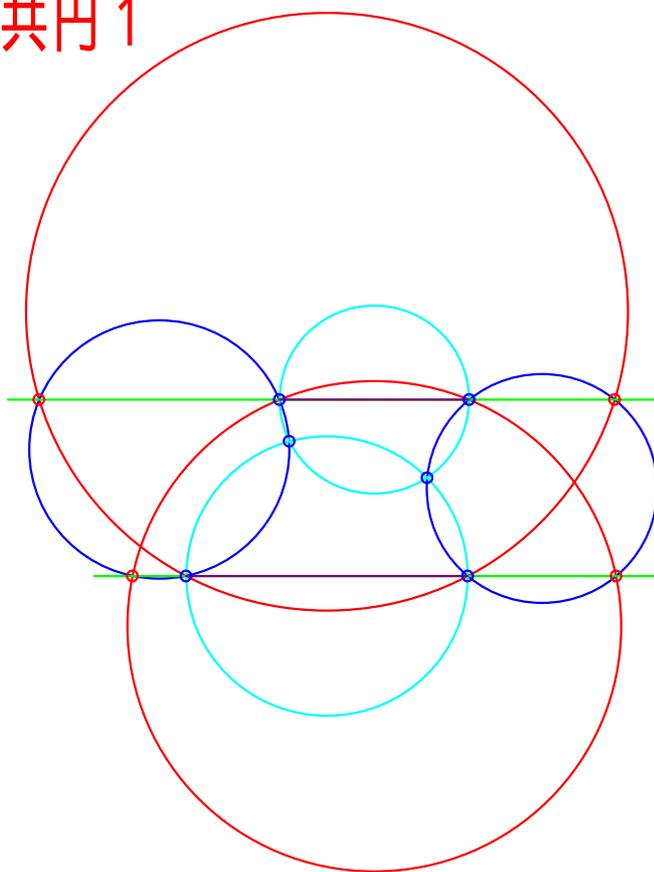
2009-2-4

蛭子井博孝

平行線 共円 1

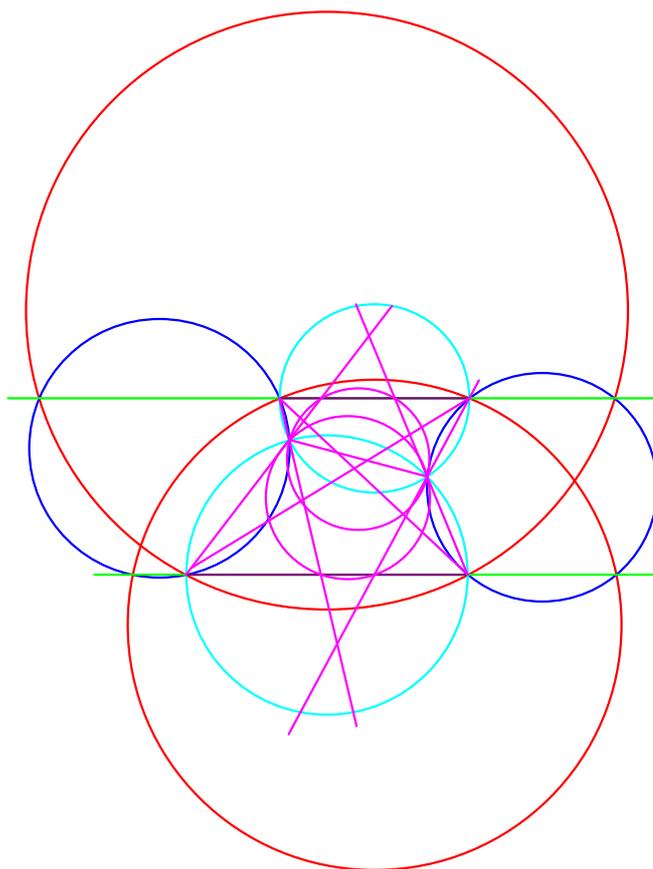
HI-150

2008-2-7



蛭子井博孝  
2G7H2E8Y

2009-2-4



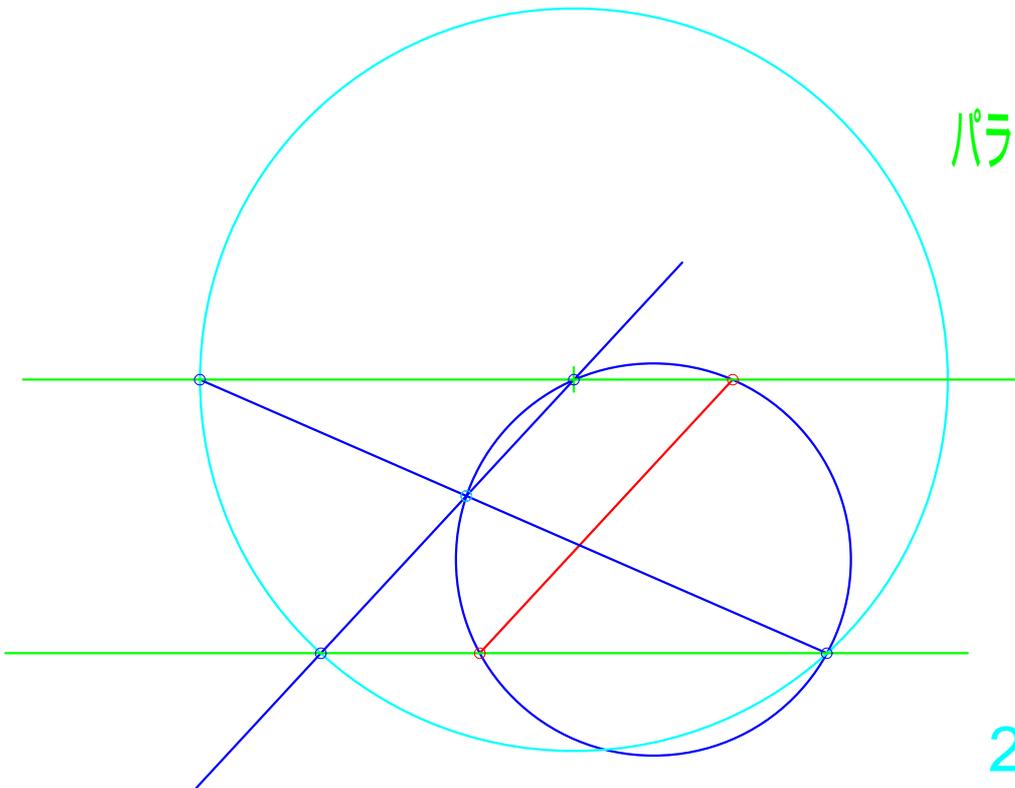
蛭子井博孝

# 平行線 平行線 1

HI-151

2008-2-7

平行線 ありがとう

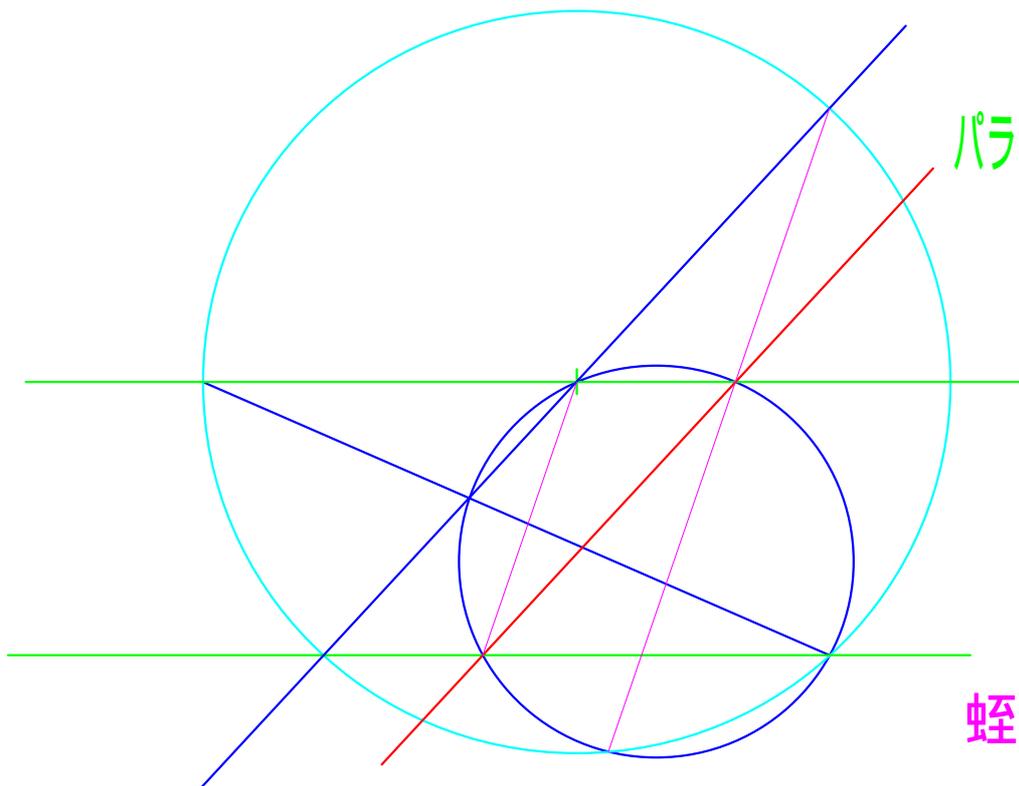


蛭子井博孝

2G7H3E8Y

2009-2-4

平行線 ありがとう



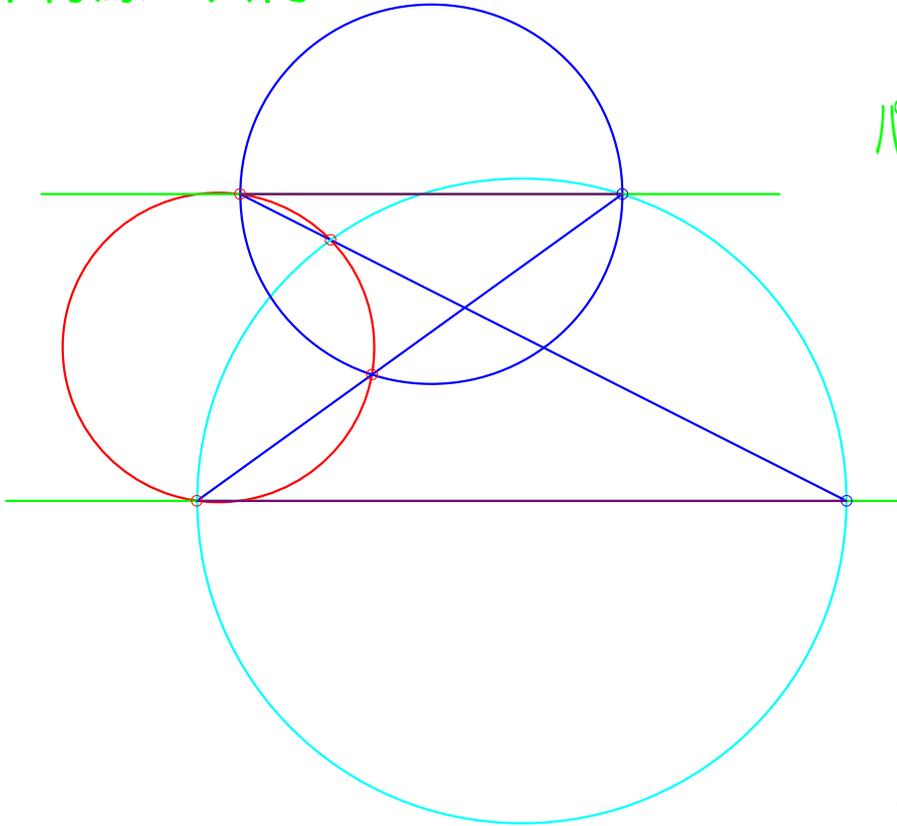
蛭子井博孝

平行線 共円

HI-152

2008-2-7

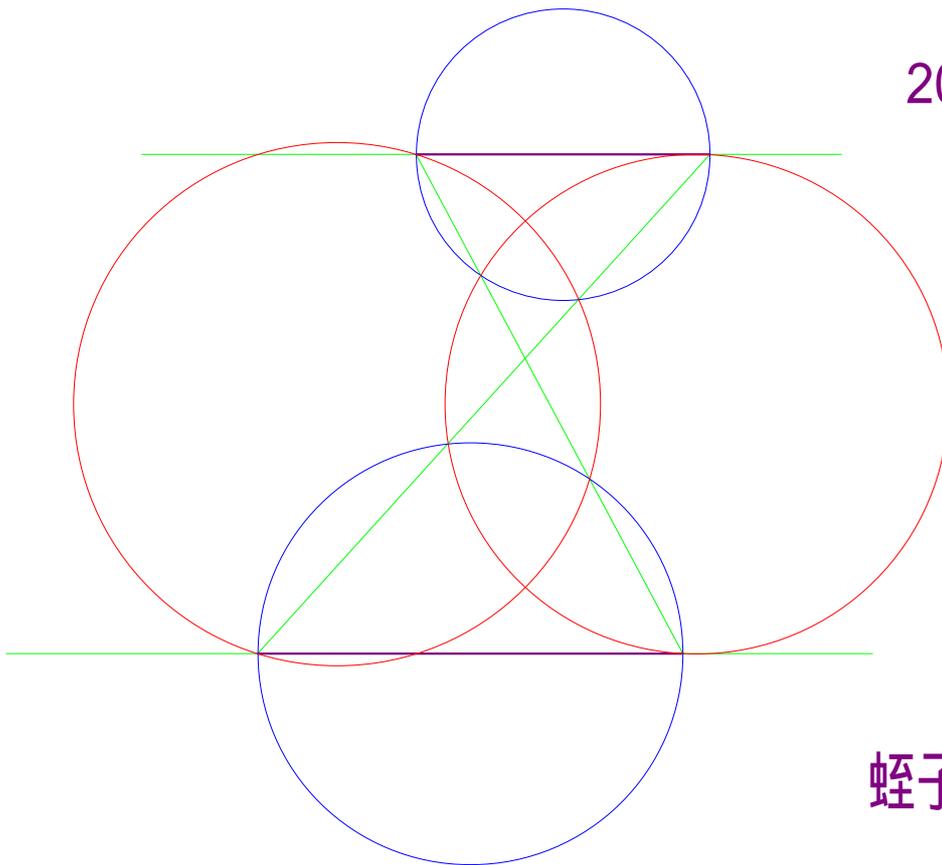
パラレル ありがとう



蛭子井博孝

2G7H4E8Y

2009-2-4

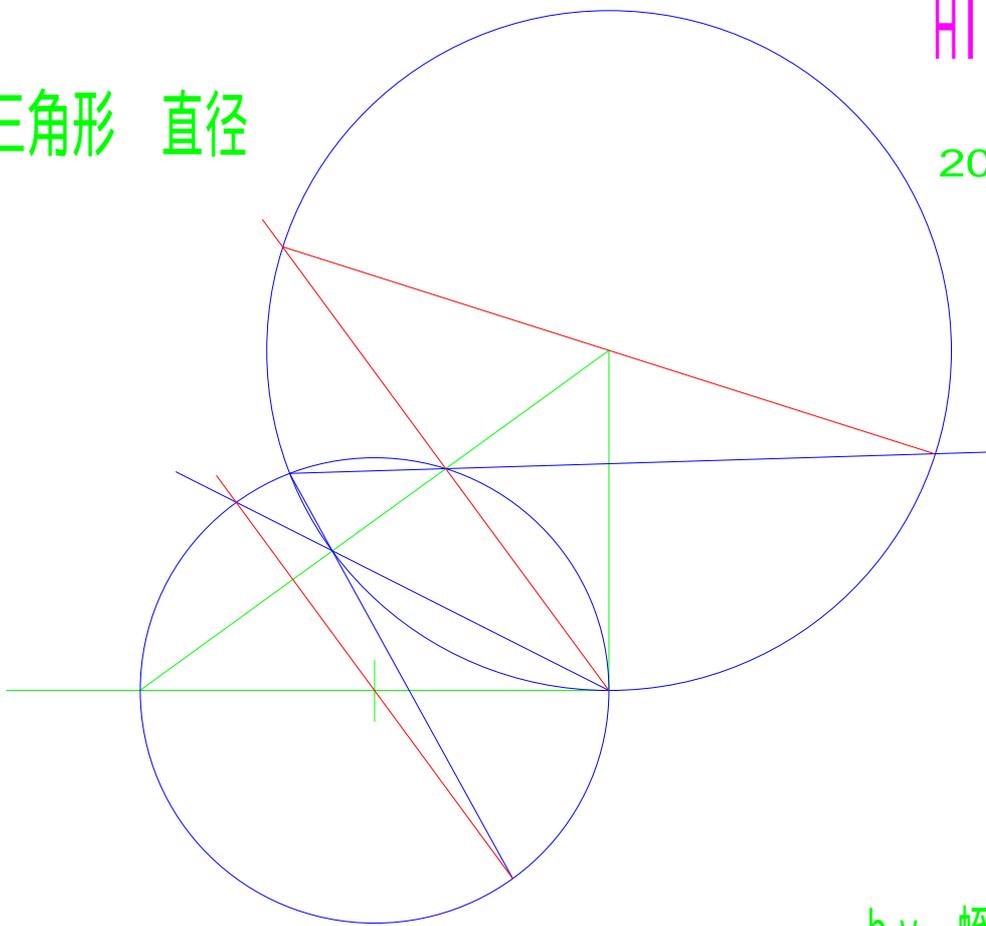


蛭子井博孝

HI-153

直角三角形 直径

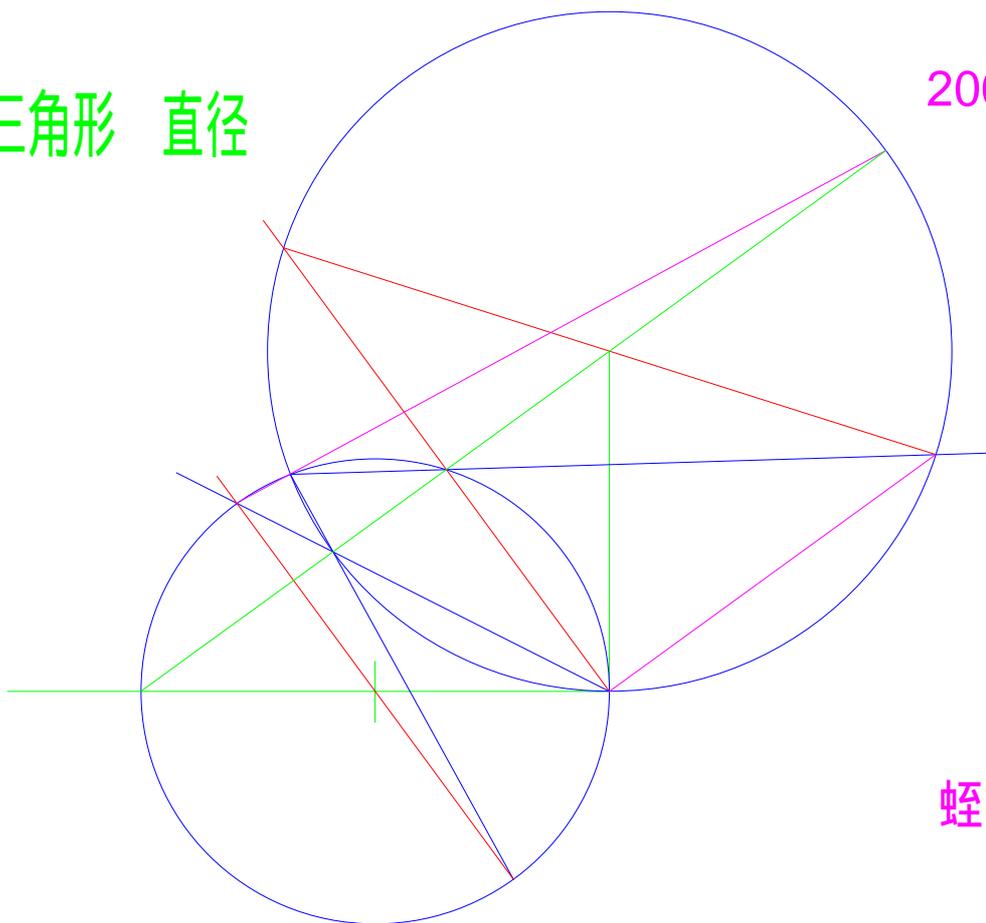
2008-2-8



by 蛭子井博孝

直角三角形 直径

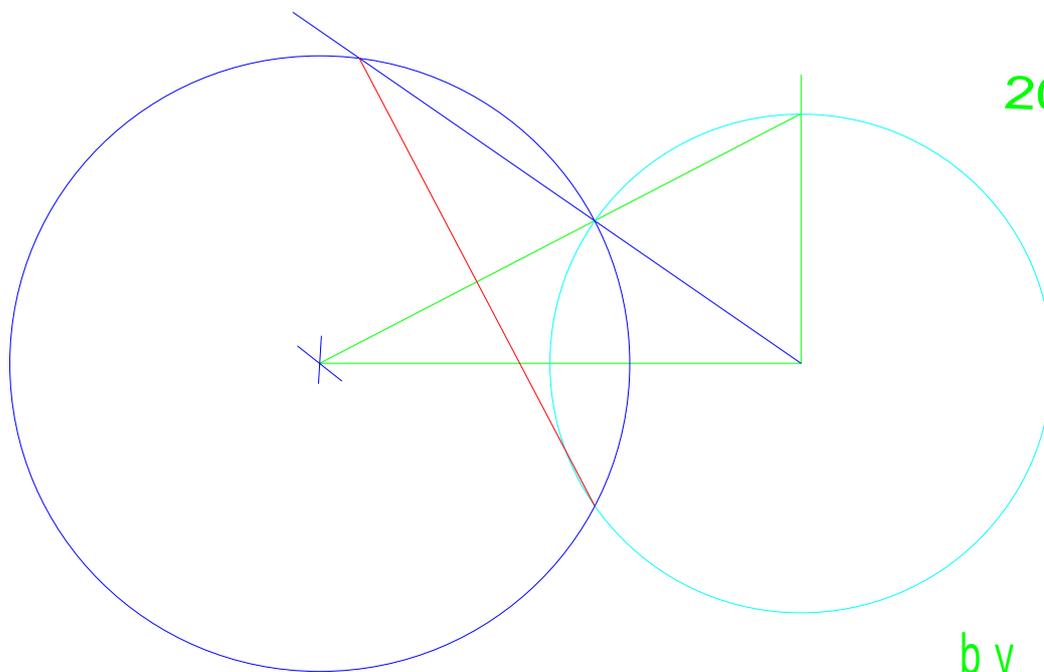
2009-2-4



蛭子井博孝

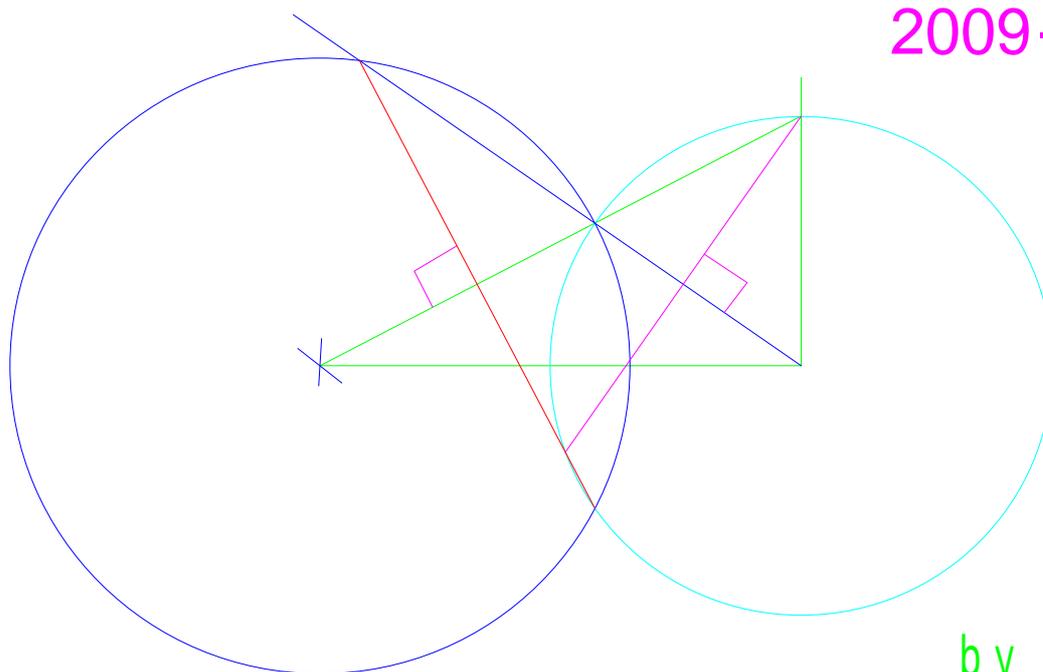
傑作問題 直角三角形 斜辺に直交

HI-154



2008-2-8

by 蛭子井博孝

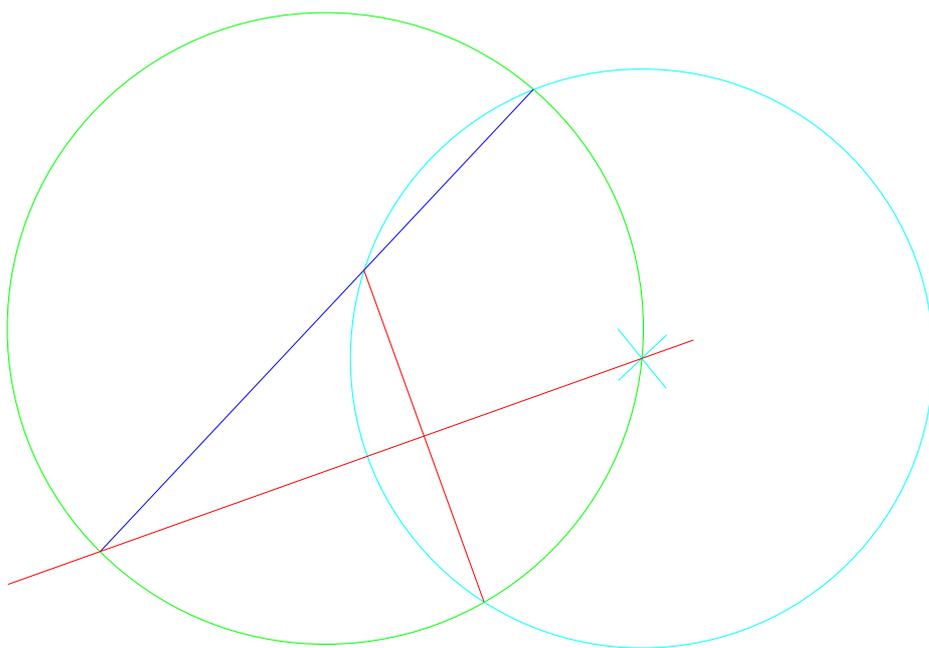


2009-2-4

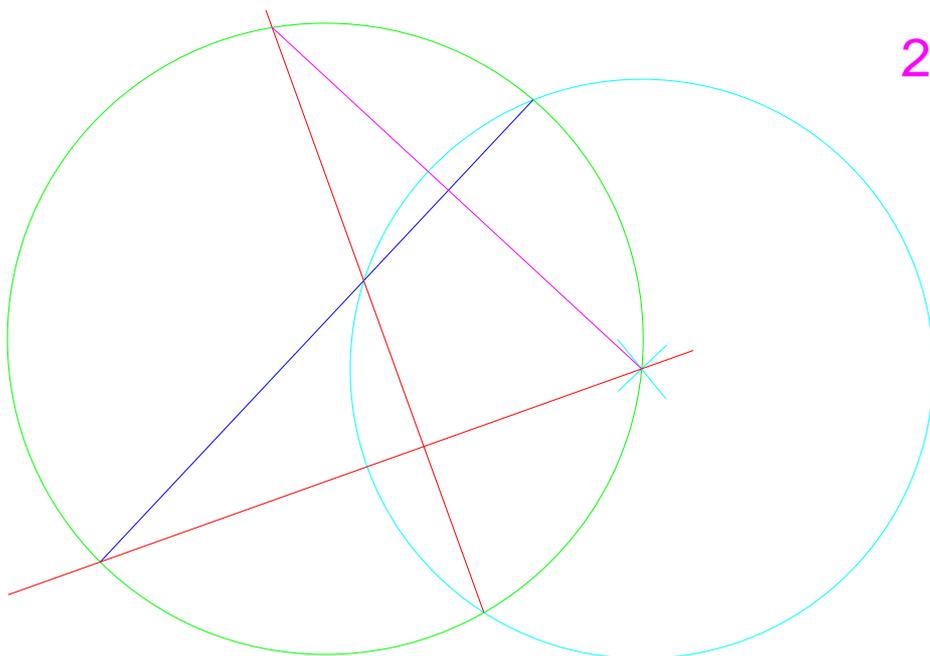
by 蛭子井博孝

# 円 直交 1

HI-155  
2008-2-8



by 蛭子井博孝



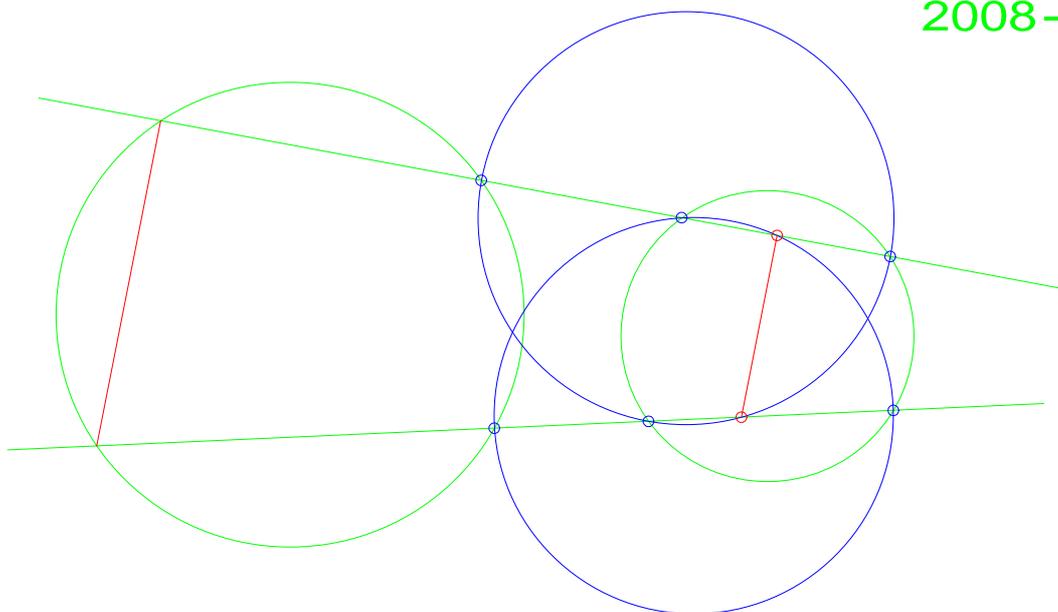
2009-2-4

by 蛭子井博孝

# 2円2直線 平行1

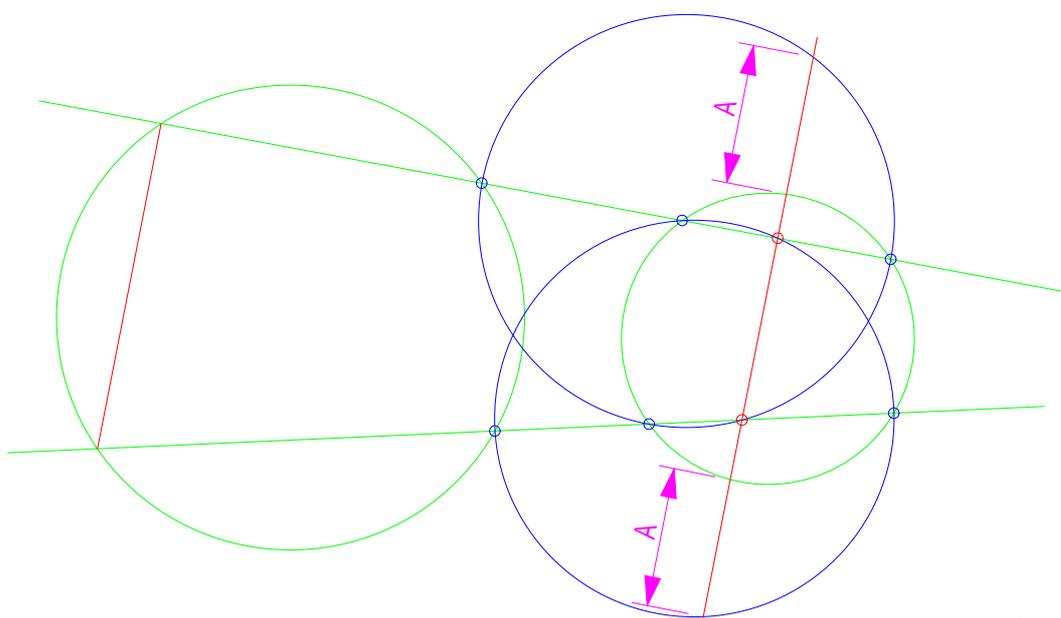
HI-156

2008-2-8



by 蛭子井博孝

2009-2-4

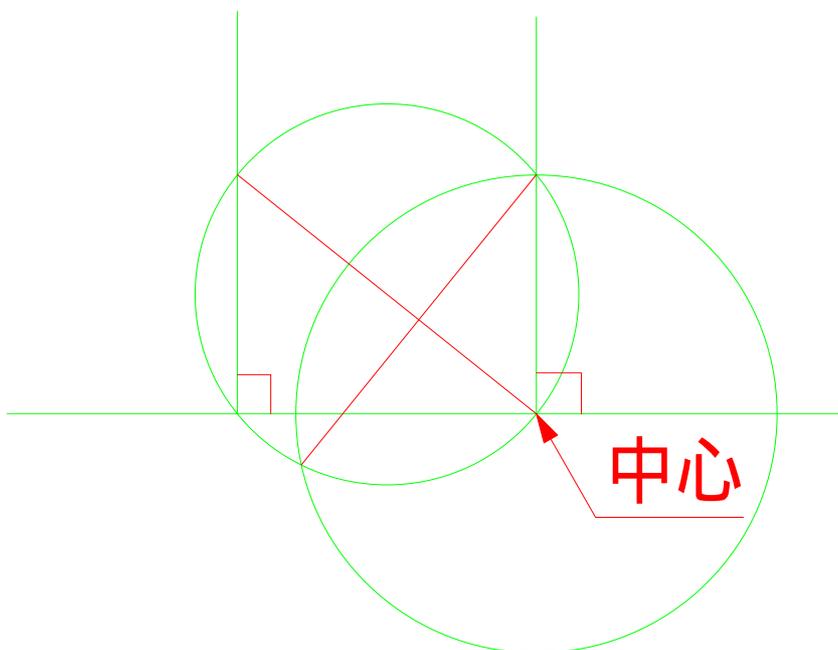


蛭子井博孝

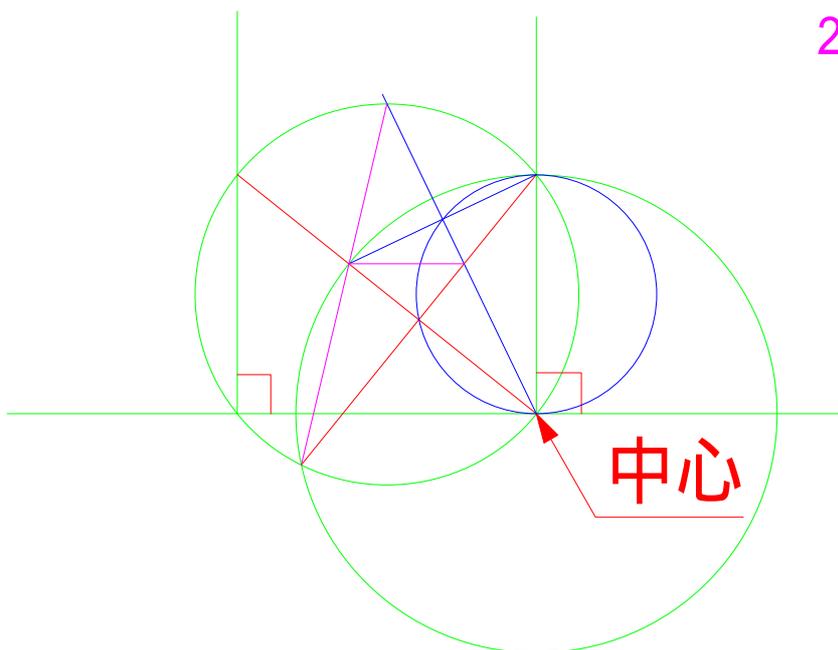
2-9-2 平行線 直交 2

HI-157

2008-2-9



by 蛭子井博孝



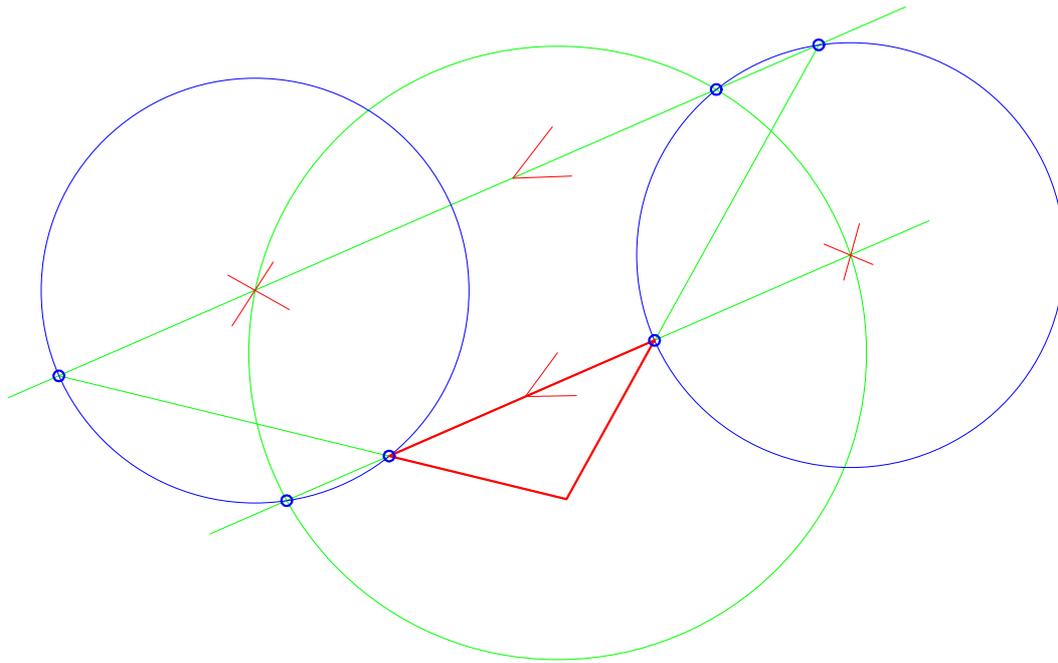
2009-2-5

蛭子井博孝

HI-158

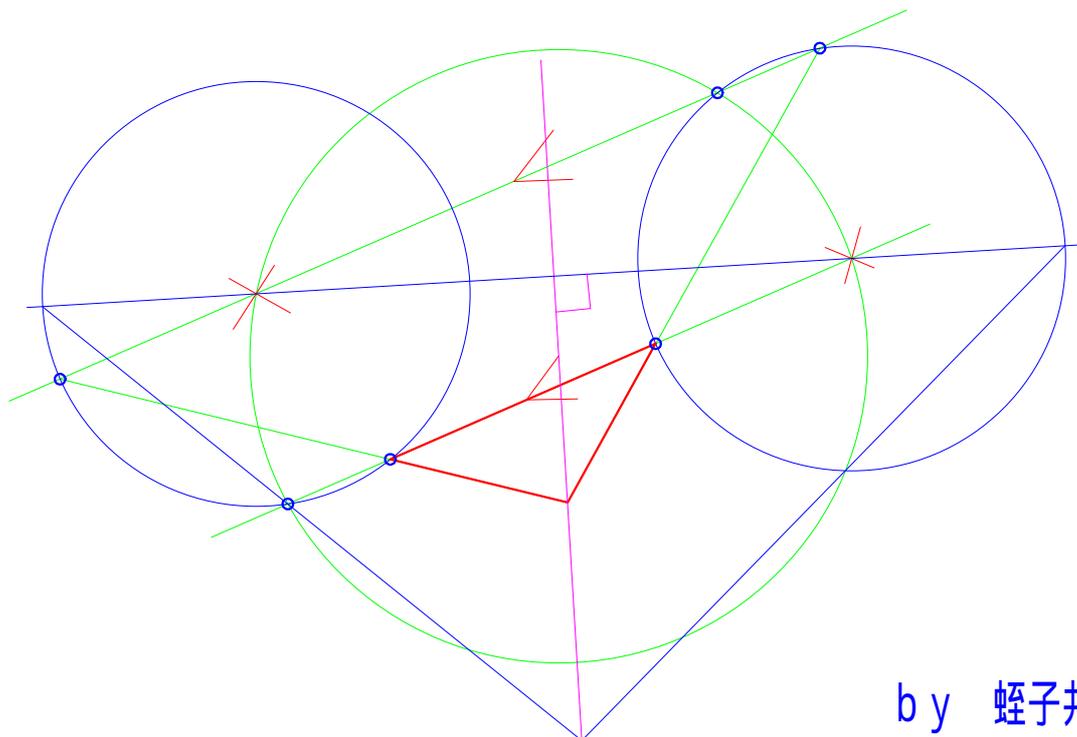
2-9-3 平行線 2等辺三角形

2008-2-9



by 蛭子井博孝

2009-2-5

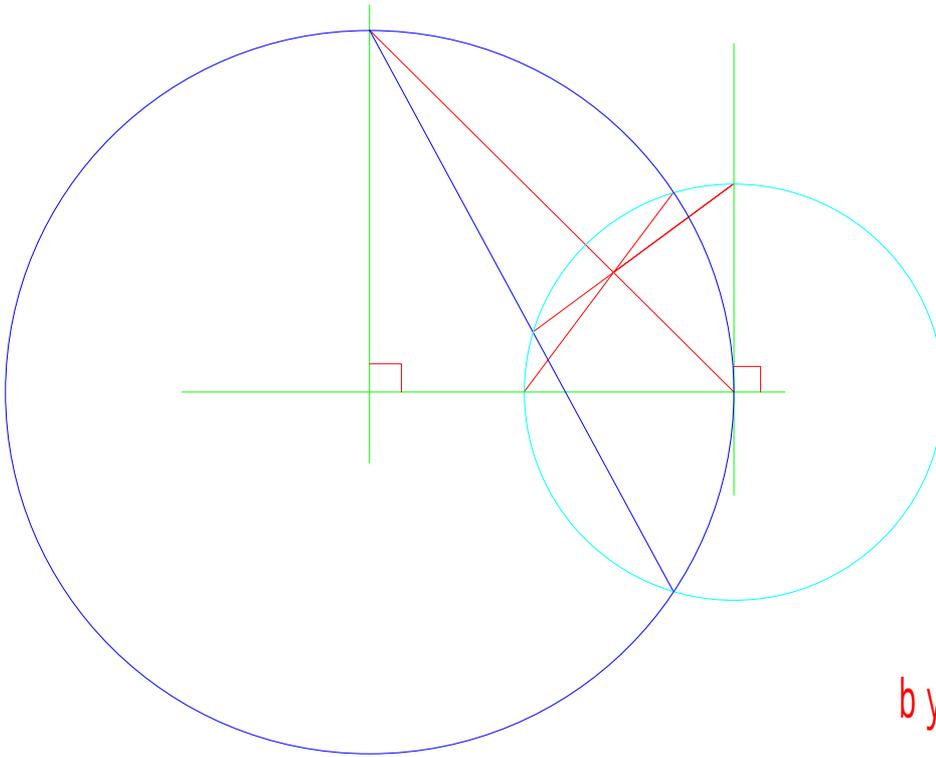


by 蛭子井博孝

HI-159

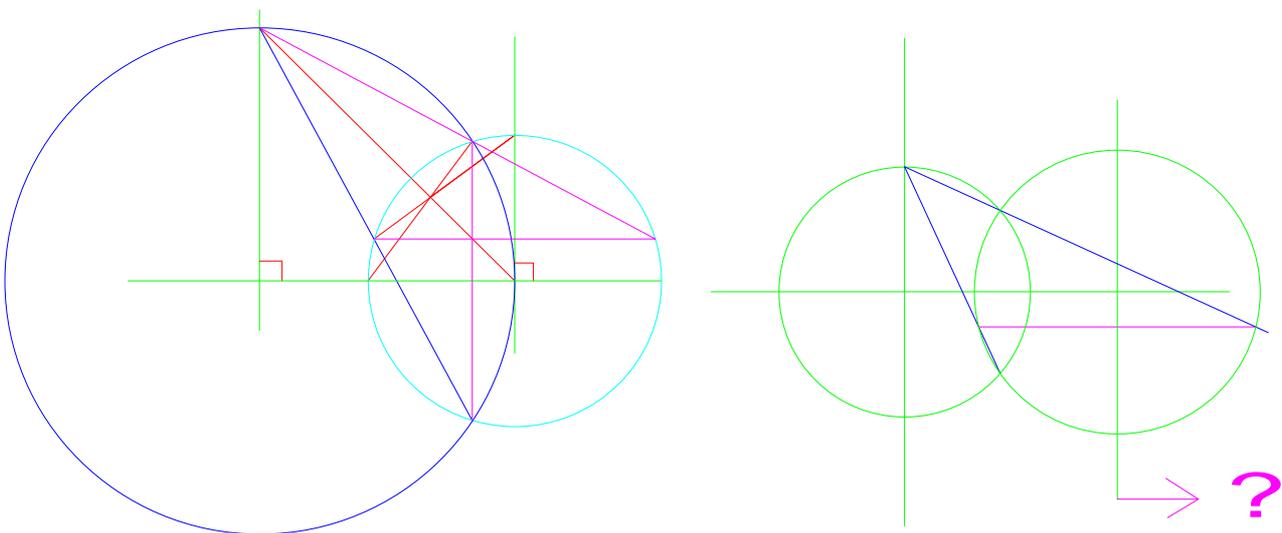
2-9-4 平行線 共点

2008-2-9



by 蛭子井博孝

2009-2-5

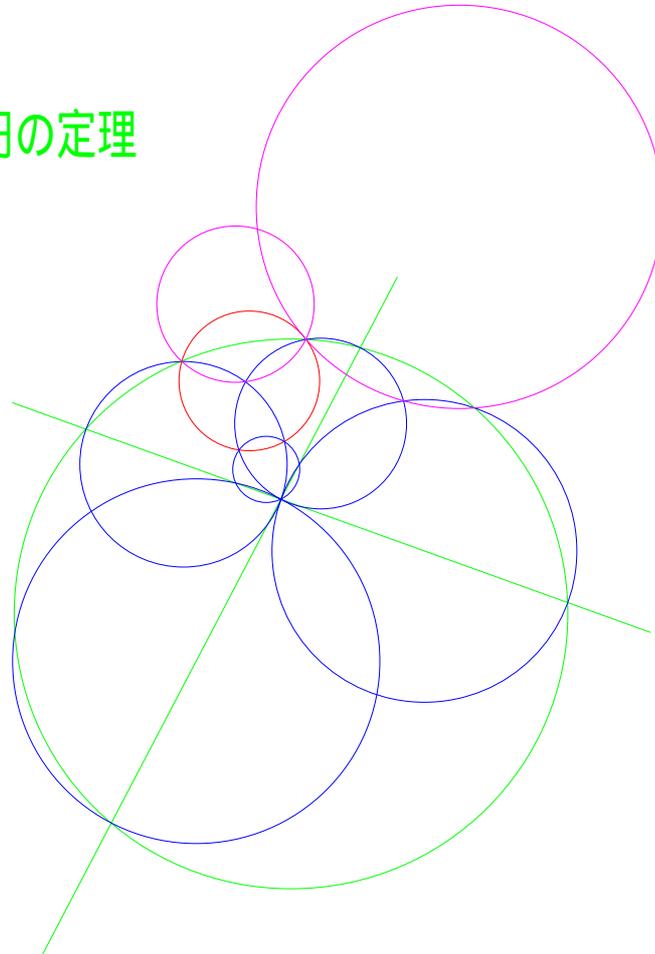


by 蛭子井博孝

HI-160

4 直径円の定理

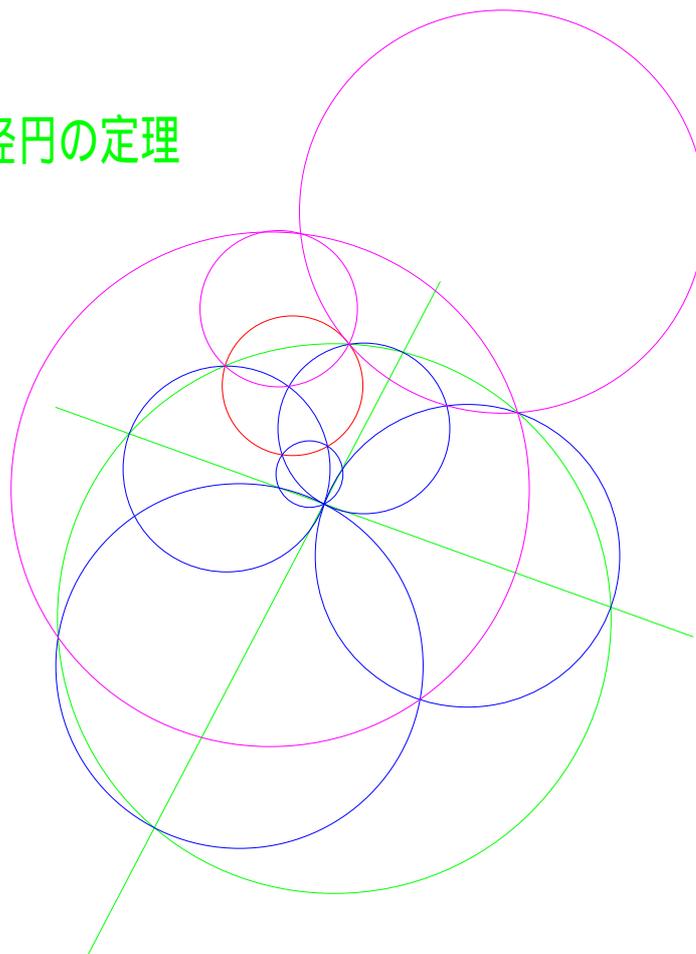
2008-2-10



by 蛭子井博孝

4 直径円の定理

2009-2-5

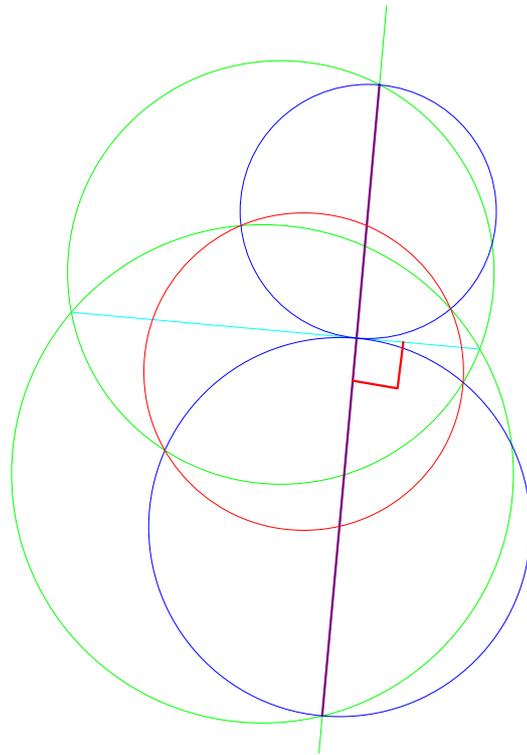


蛭子井博孝

HI-161

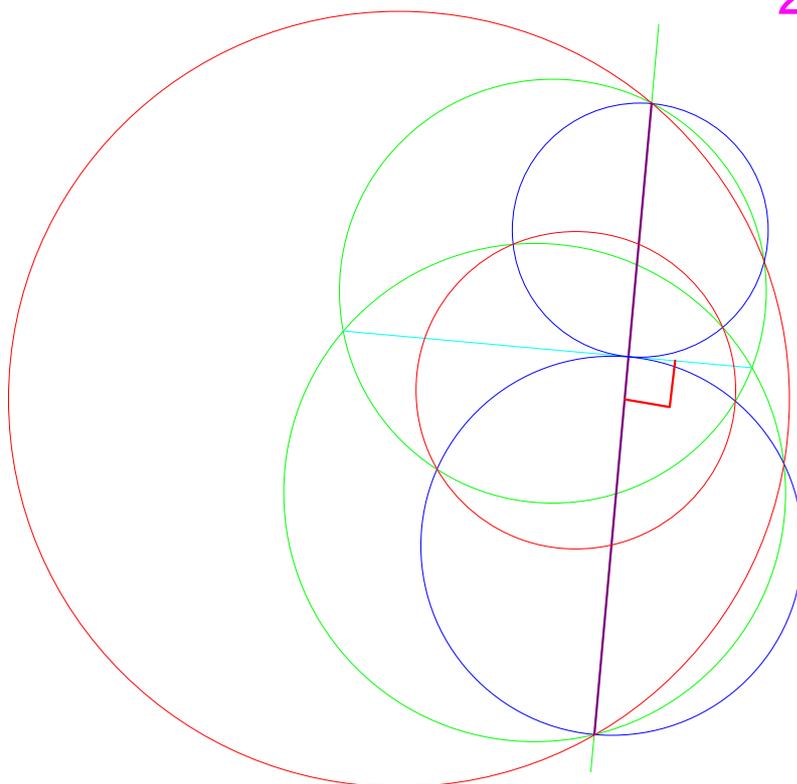
2-10-2 2円 共円 (4円5円の定理1)

2008-2-10



by 蛭子井博孝

2009-2-5

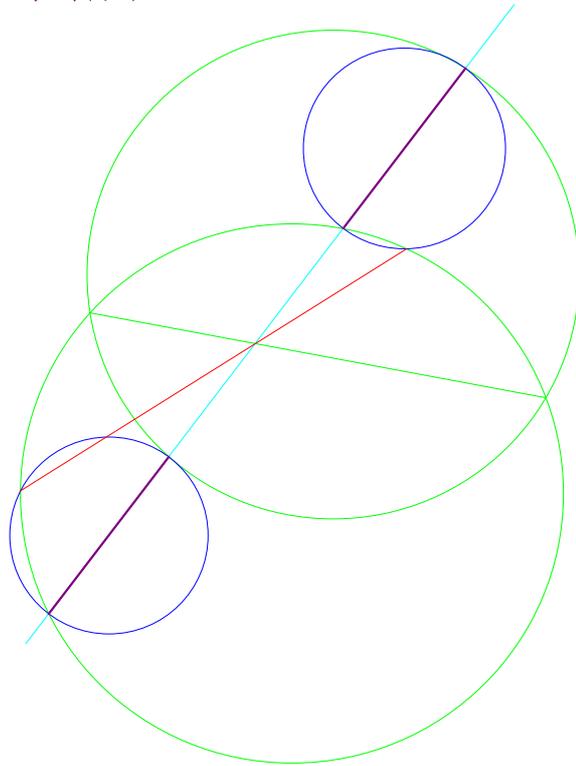


蛭子井博孝

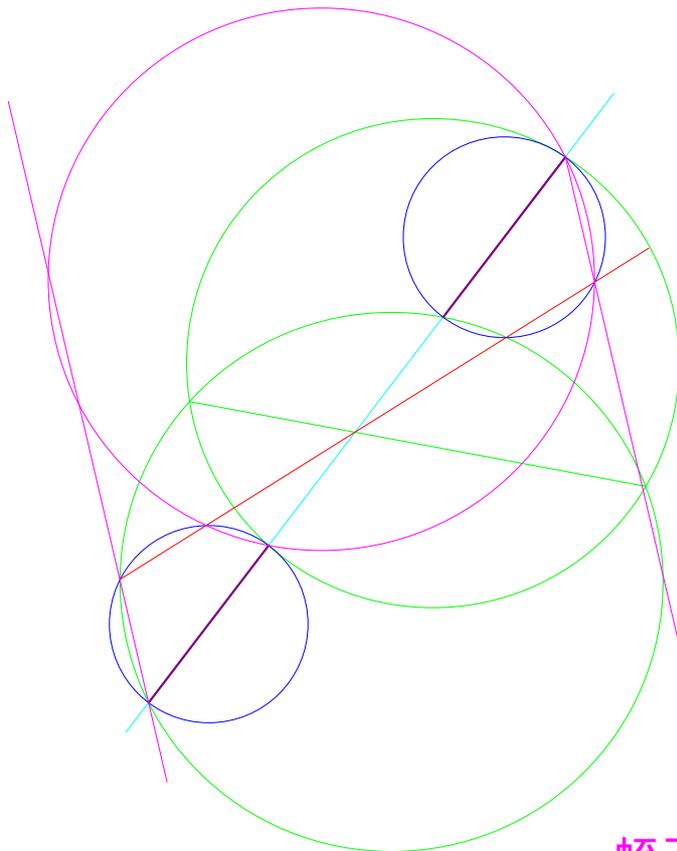
2-10-3 2円 共点

HI-162

2008-2-10



by 蛭子井博孝



2009-2-5

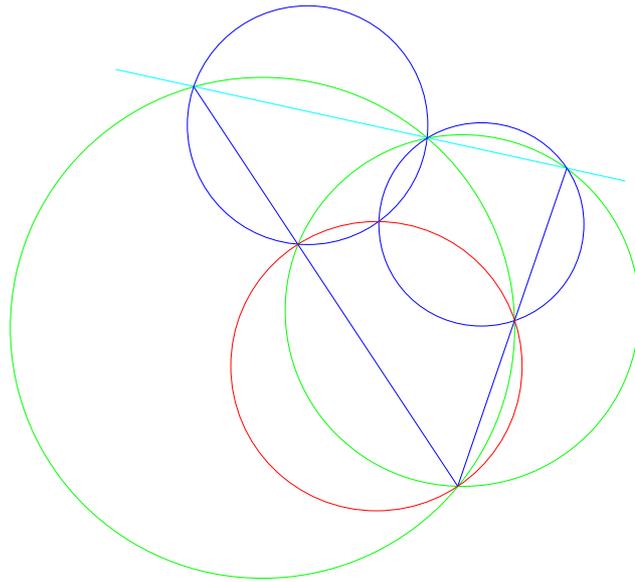
蛭子井博孝



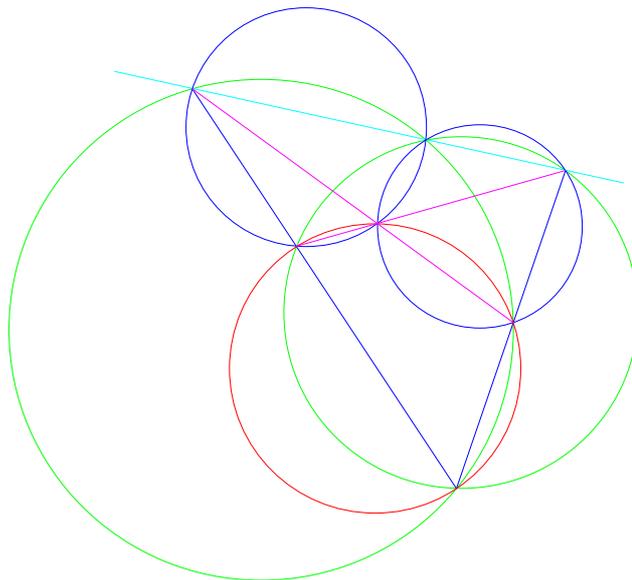
HI-163

# 5円5円の定理

2008-2-10



by 蛭子井博孝



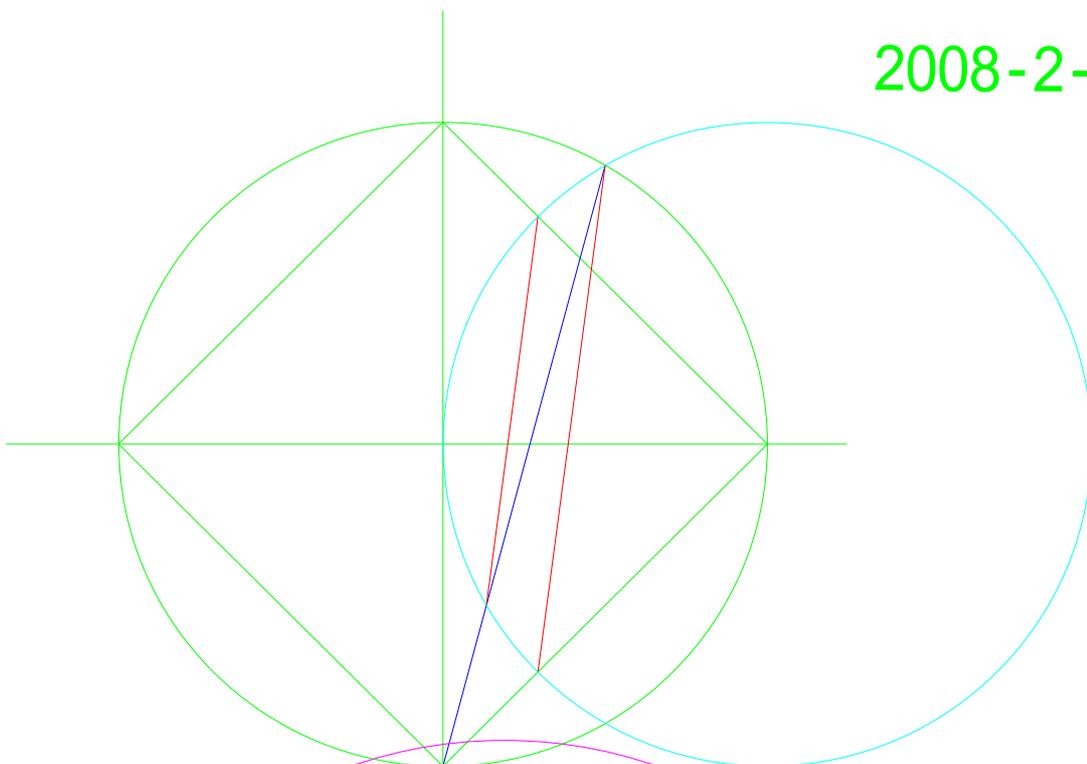
2009-2-5

by 蛭子井博孝

2-10-5 正方形円 平行1

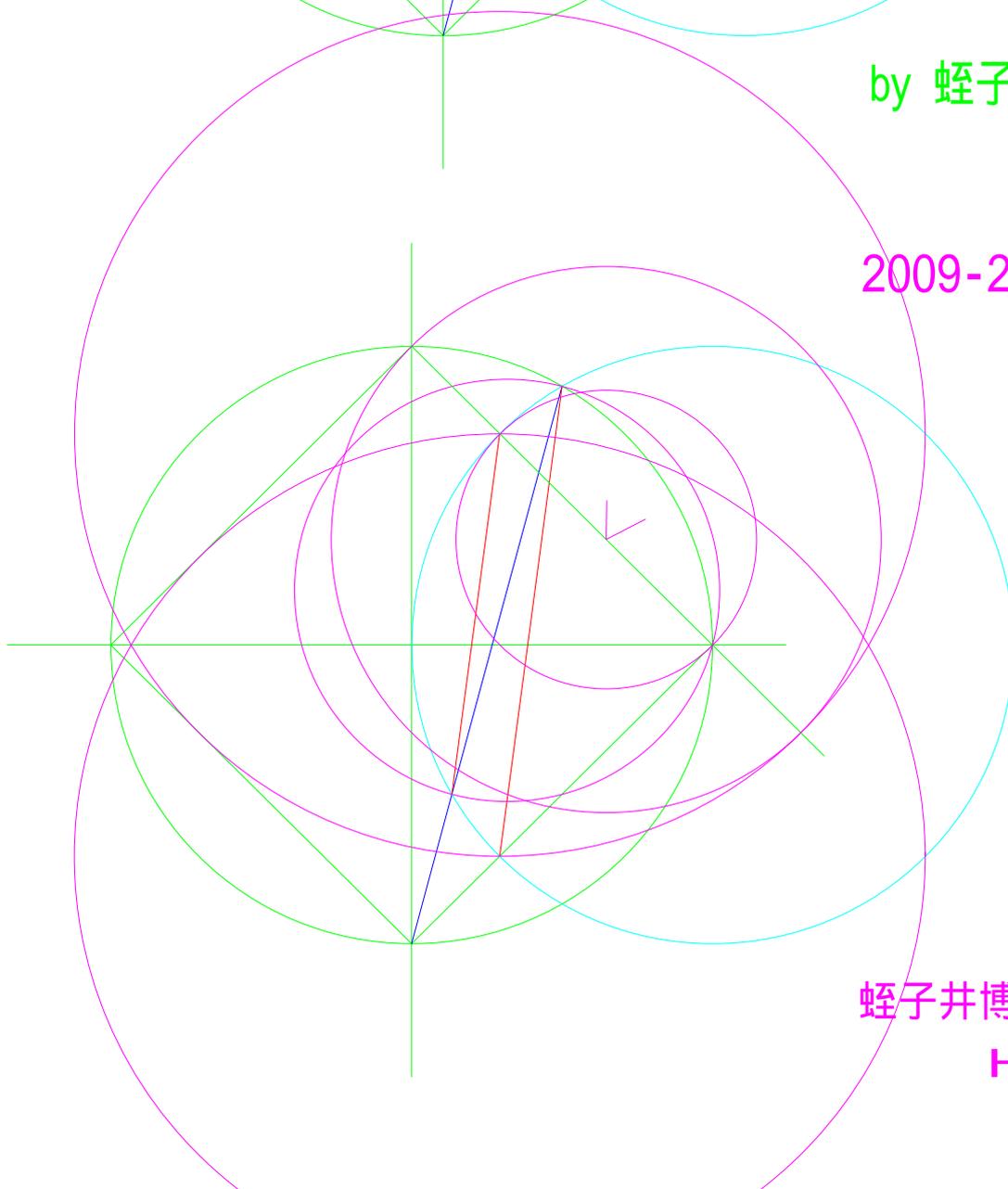
HI-164

2008-2-10



by 蛭子井博孝

2009-2-5



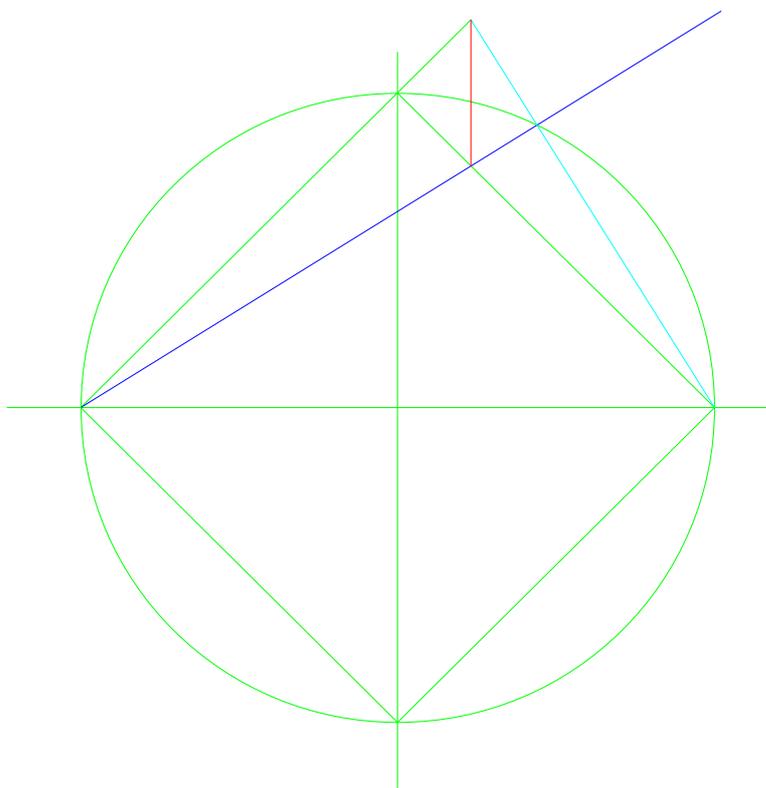
蛭子井博孝

HEX

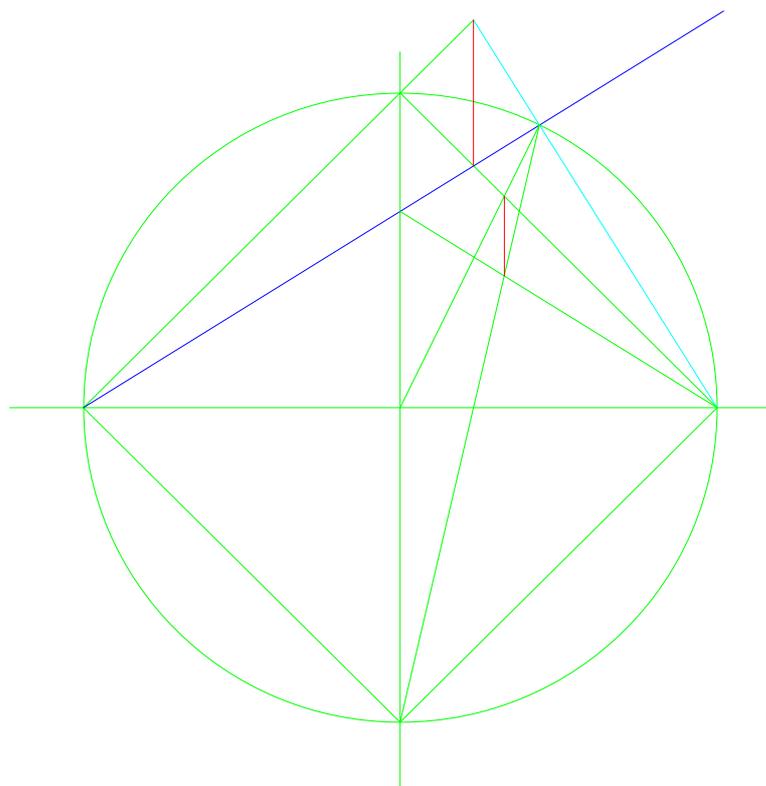
# 2-10-6 正方形円 平行2

HI-165

2008-2-10



by 蛭子井博孝



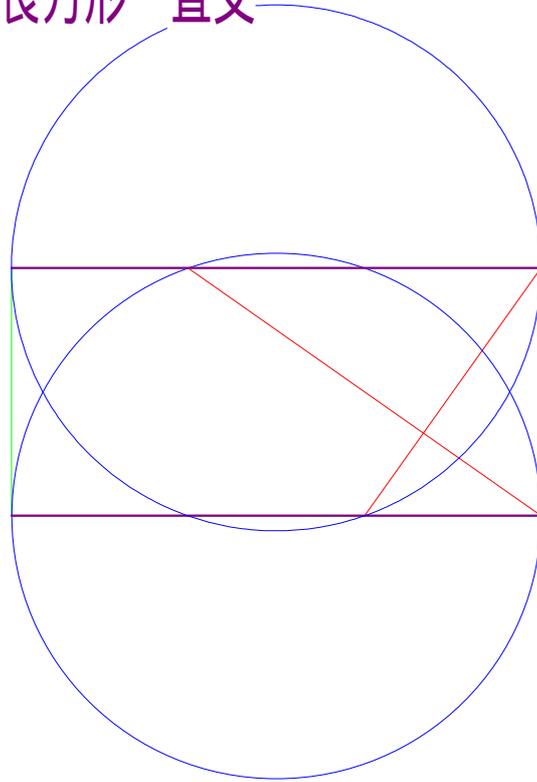
2009-2-5

蛭子井博孝

HI-166

2008-2-11

2-11-1 長方形 直交

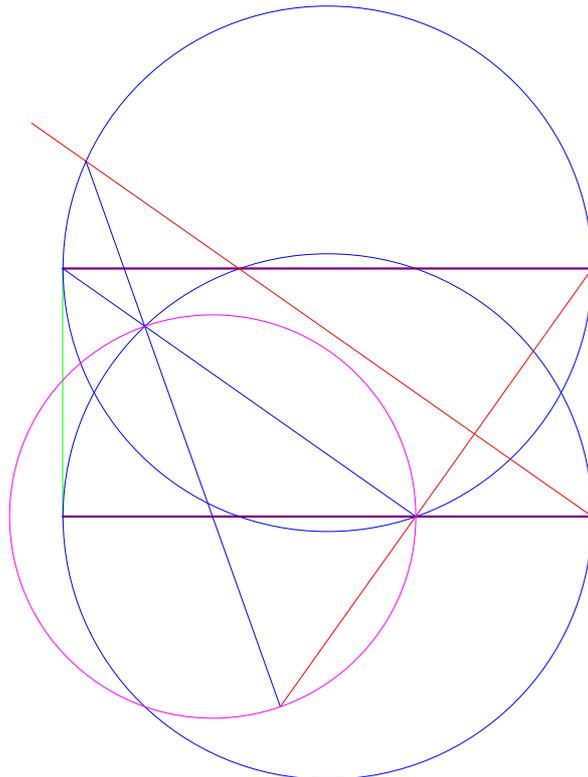


— 直径

by 蛭子井博孝

2009-2-5

HEX

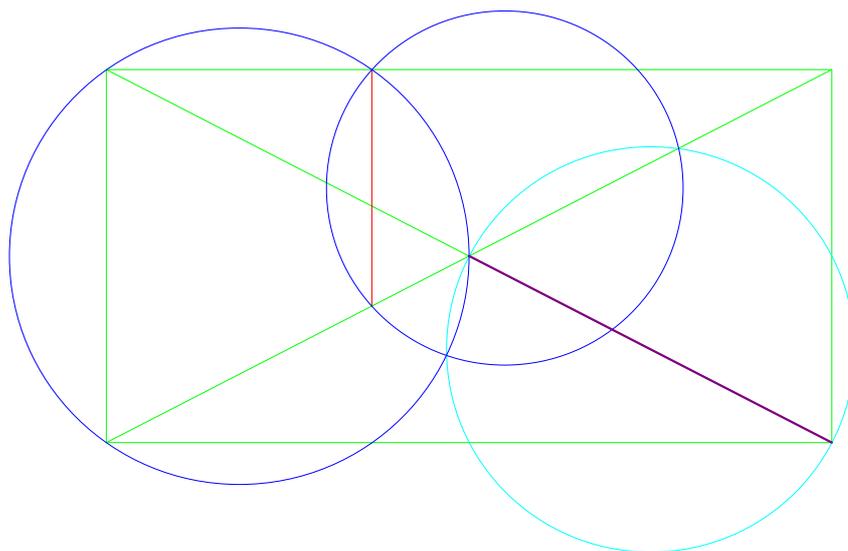


蛭子井博孝

HI-167

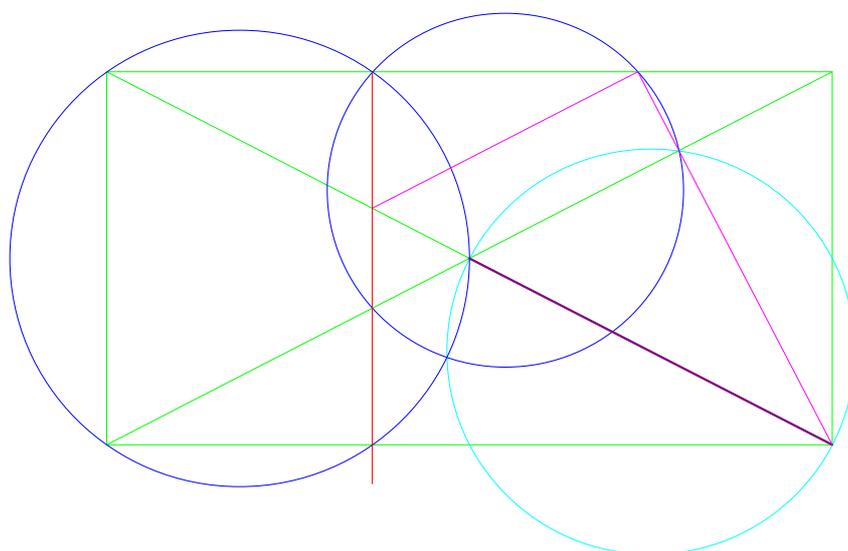
# 2-11-2 長方形 平行

2008-2-11



by 蛭子井博孝

2009-2-5

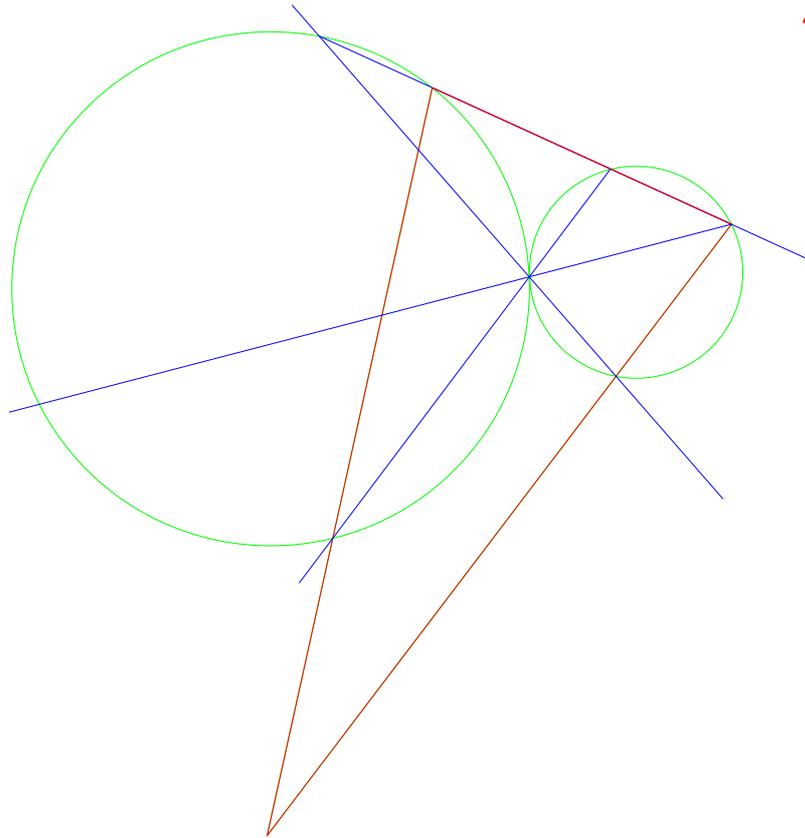


蛭子井博孝

HI-168

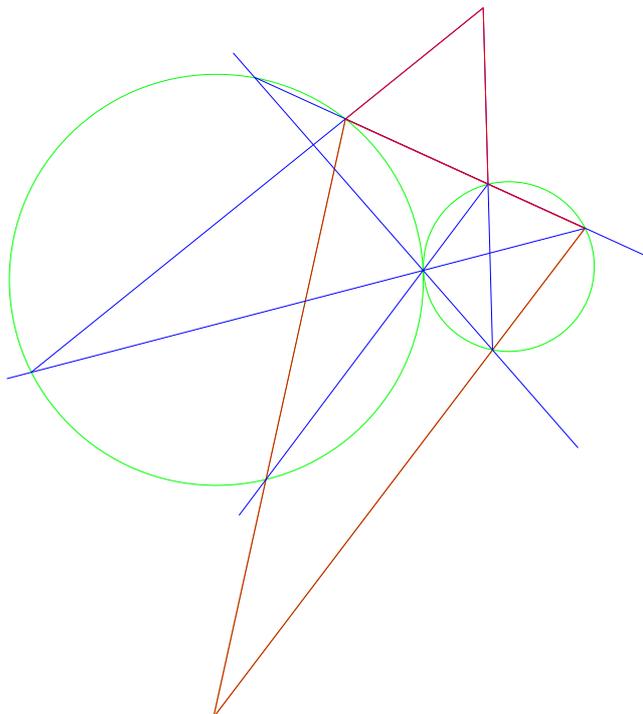
## 2-11-3 接円 2等辺三角形

2008-2-11



by 蛭子井博孝

2009-2-6



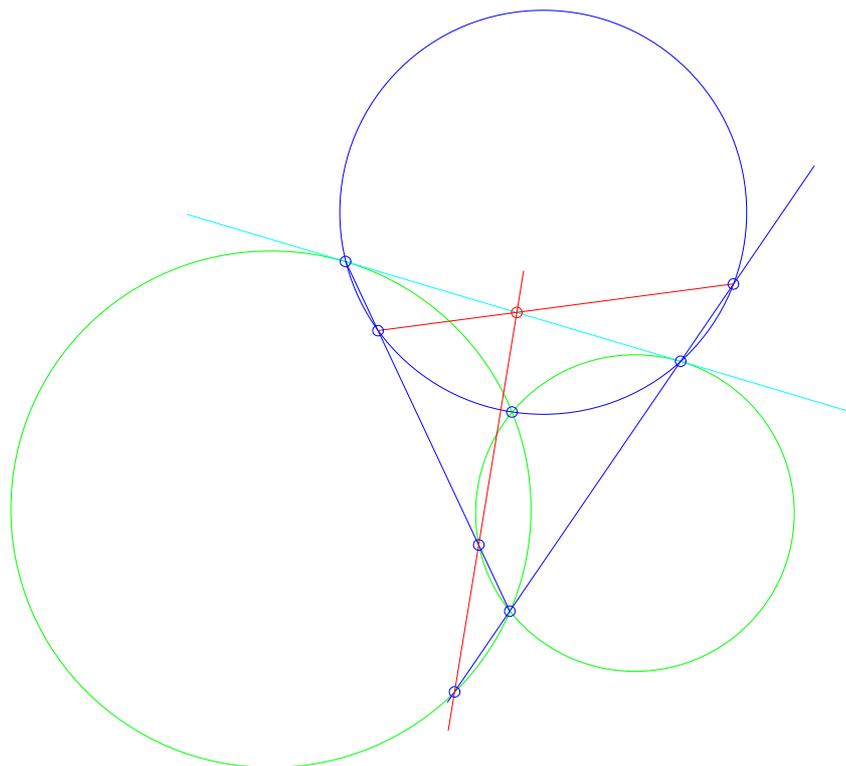
蛭子井博孝

HI-169

2-12-1 2円共通接線

共点

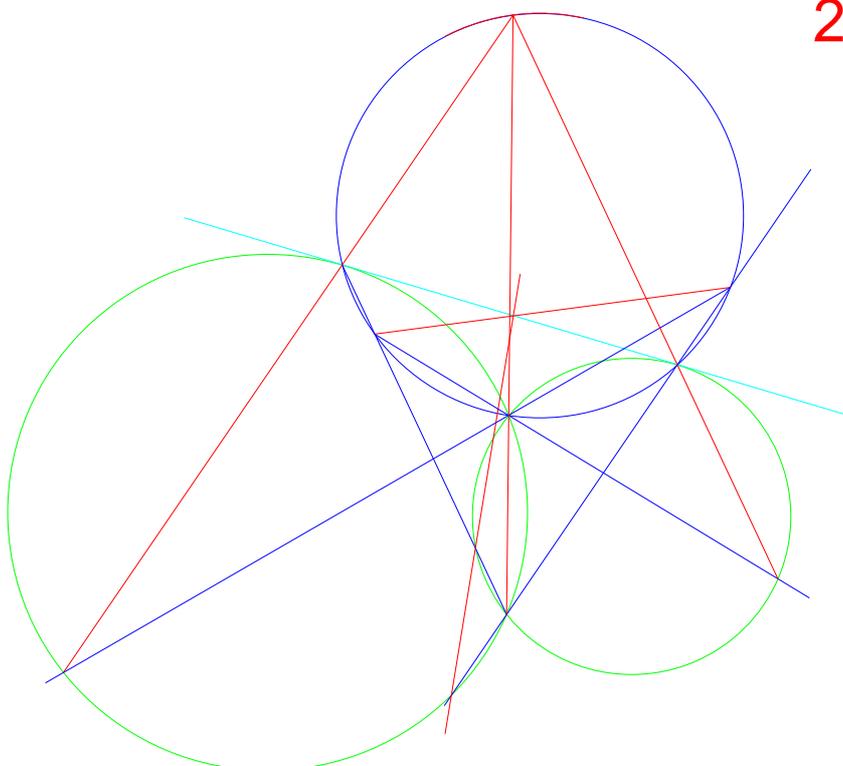
2008-2-12



by 蛭子井博孝

2009-2-6

HEX



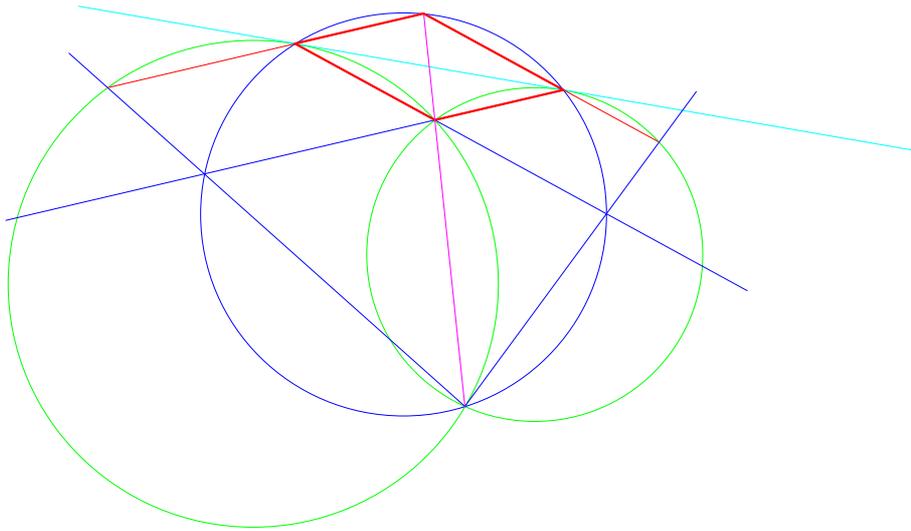
by 蛭子井博孝

HI-170

2-12-2 2円共通接線

平行四辺形

2008-2-12

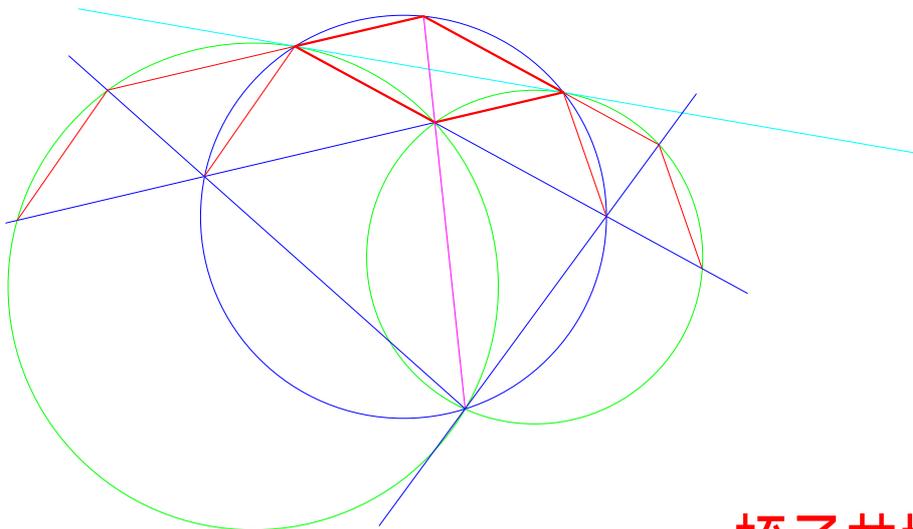


幸せ色って、何色

by 蛭子井博孝

2009-2-6

HEX



蛭子井博孝

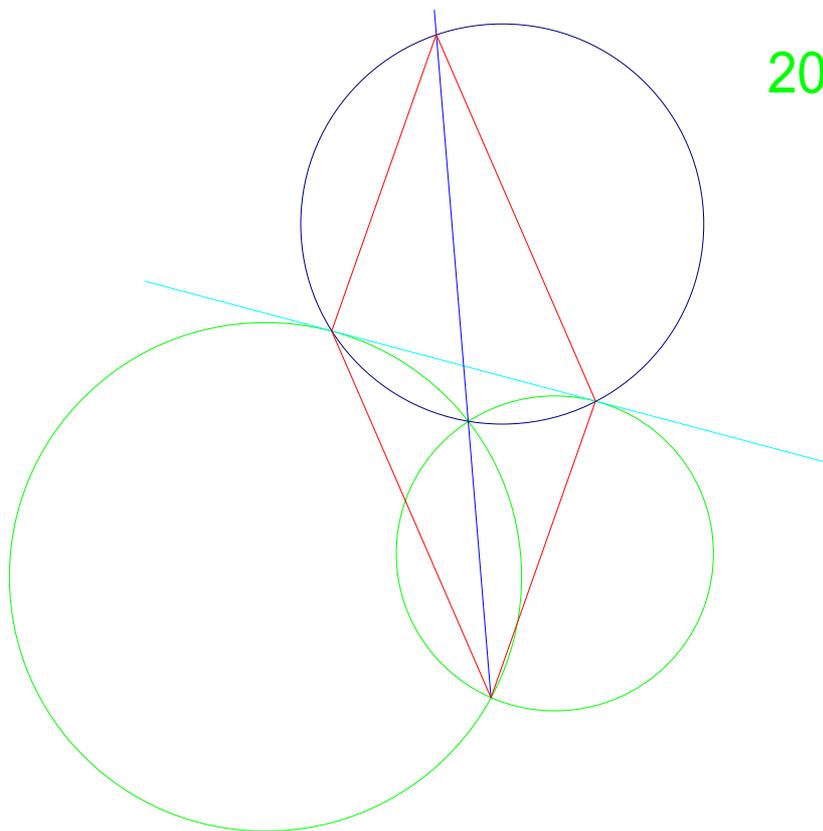
2-12-3 2円共通接線

平行四辺形

HI-171

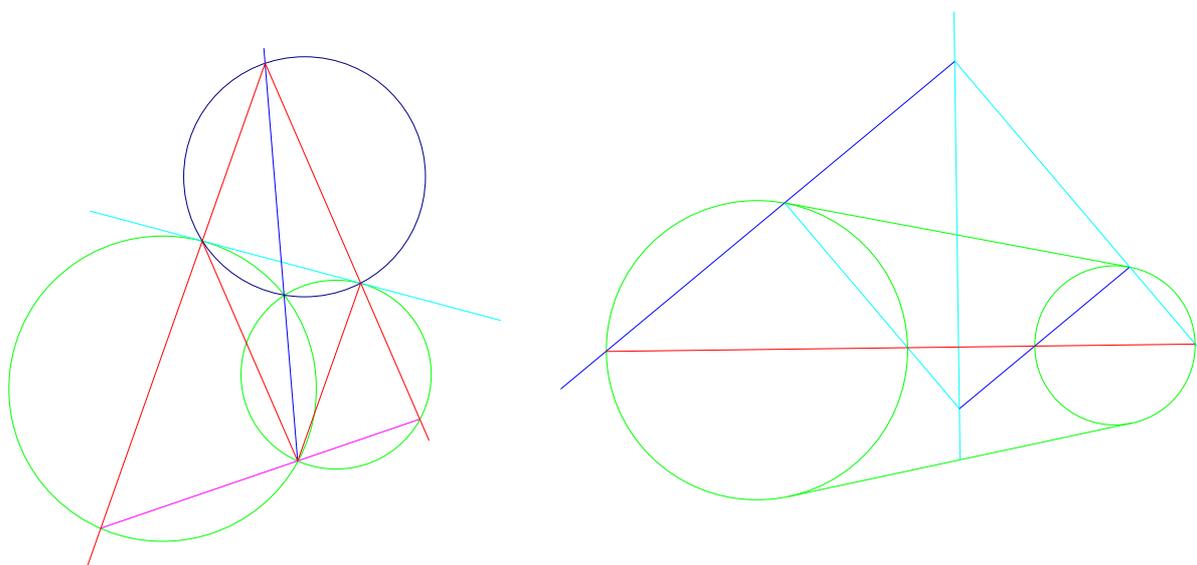
2008-2-12

愛って、幸せ色



by 蛭子井博孝

2009-2-6



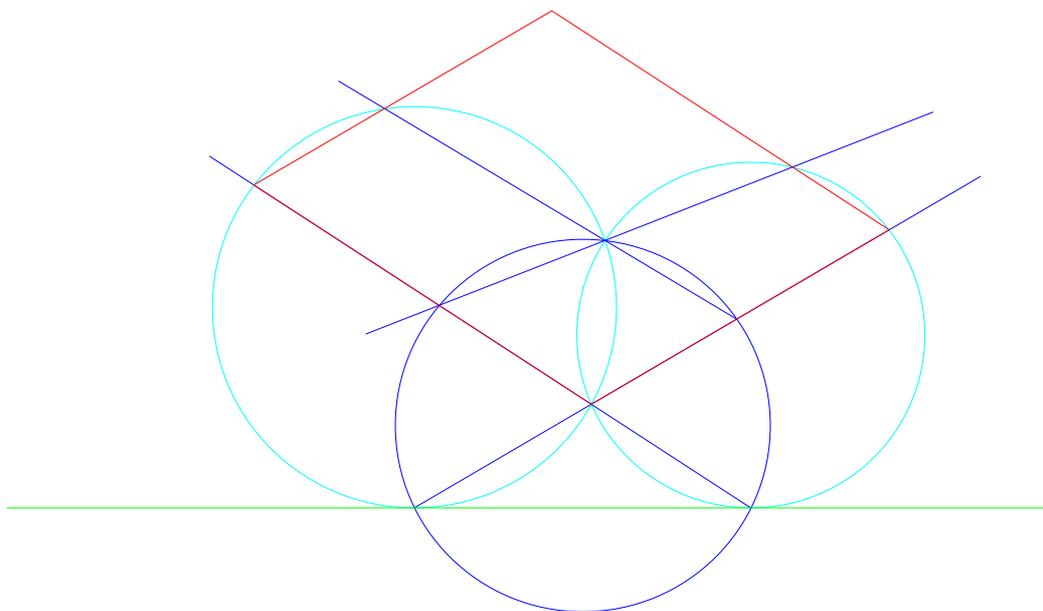
蛭子井博孝

HI-172

2-12-4 直線2接円

平行四辺形

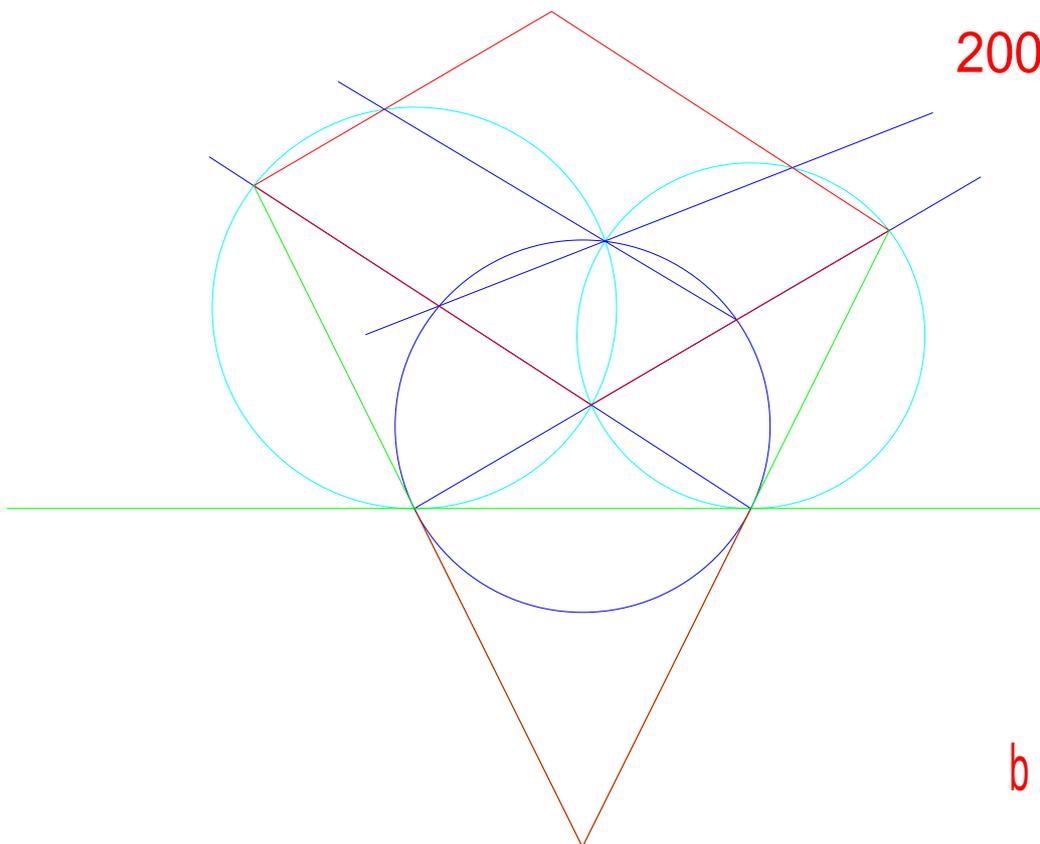
2008-2-12



by 蛭子井博孝

2009-2-6

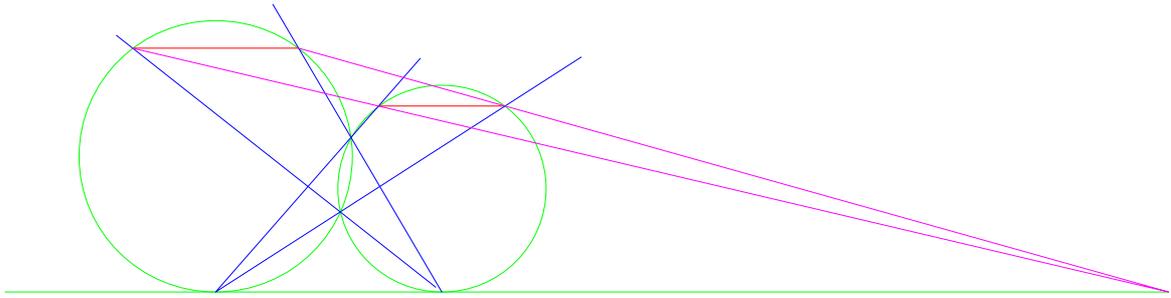
HEX



by 蛭子井博孝

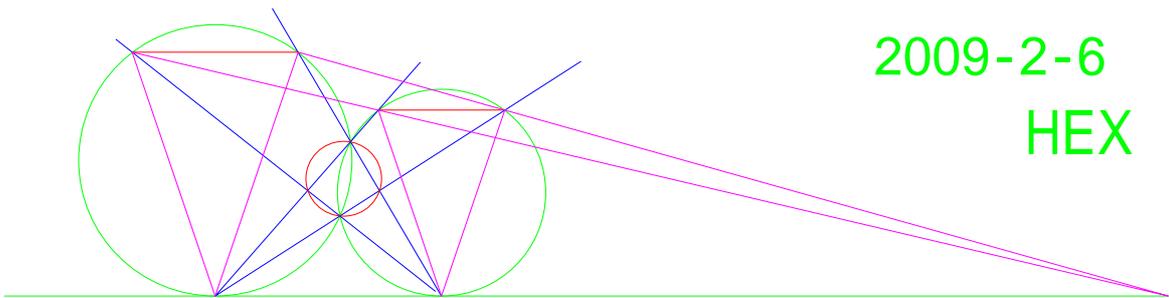
2-12-5 直線2接円 平行共点

HI-173  
2008-2-12

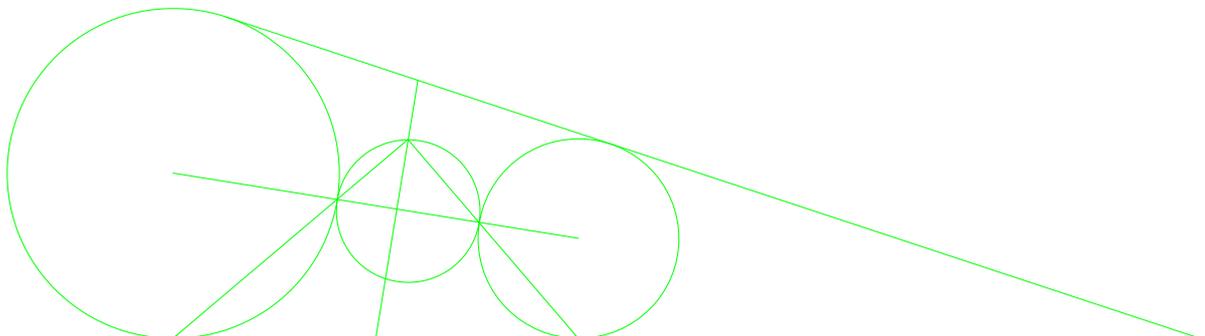


ありがとう 接円

by 蛭子井博孝



2009-2-6  
HEX



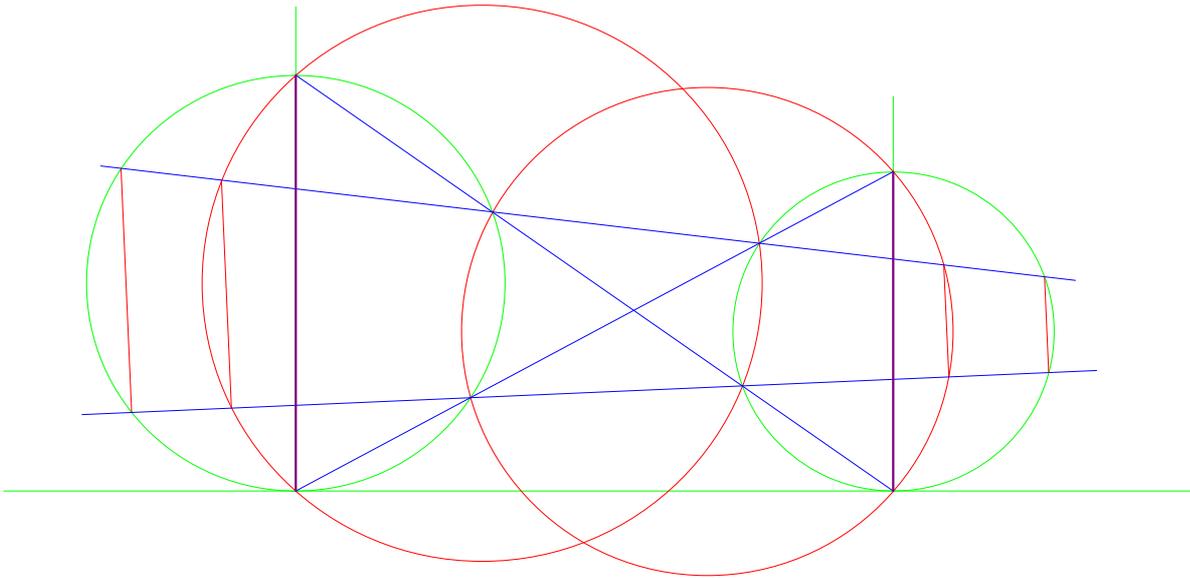
蛭子井博孝

2-12-6 直線2接直径円

4 平行線

HI-174

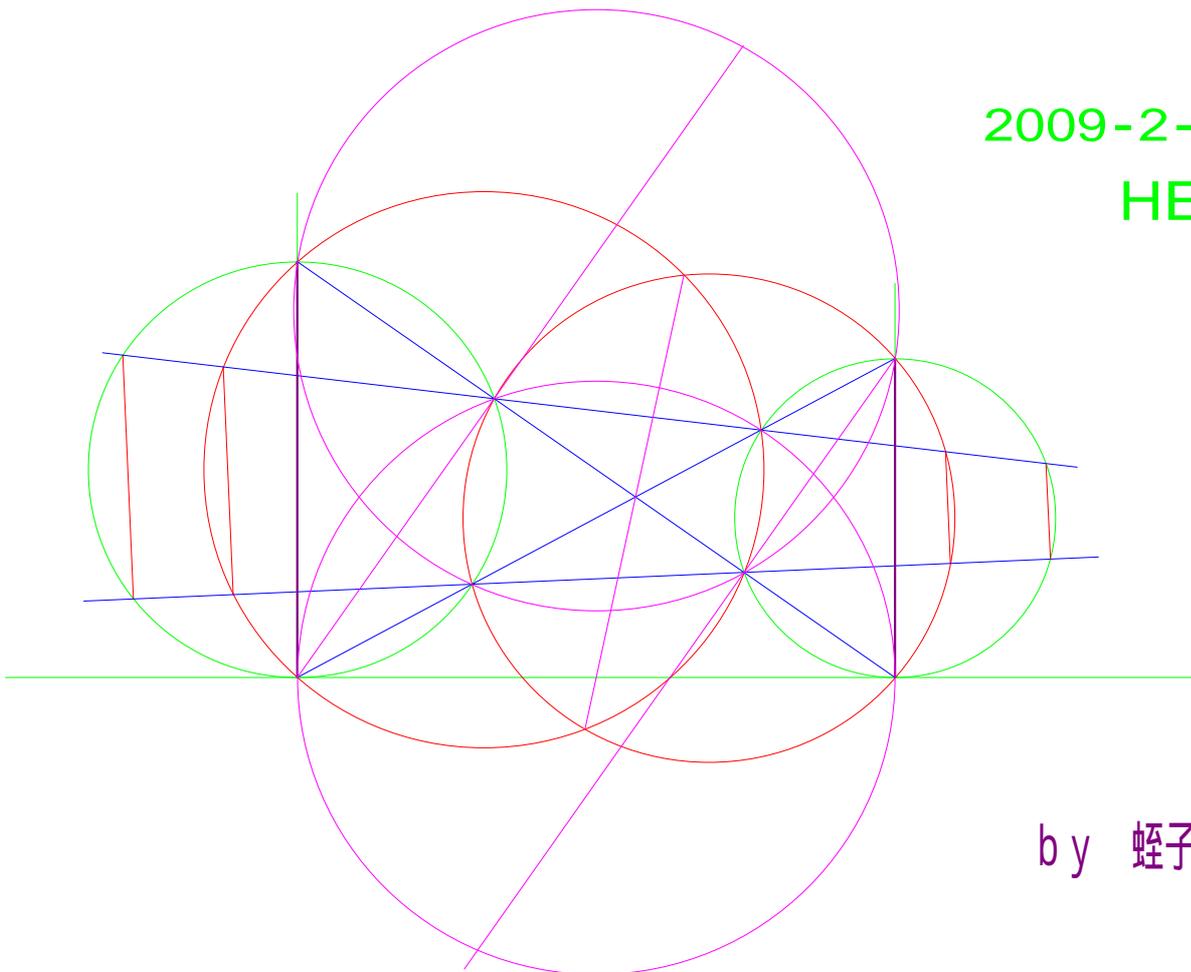
2008-2-12



by 蛭子井博孝

2009-2-7

HEX

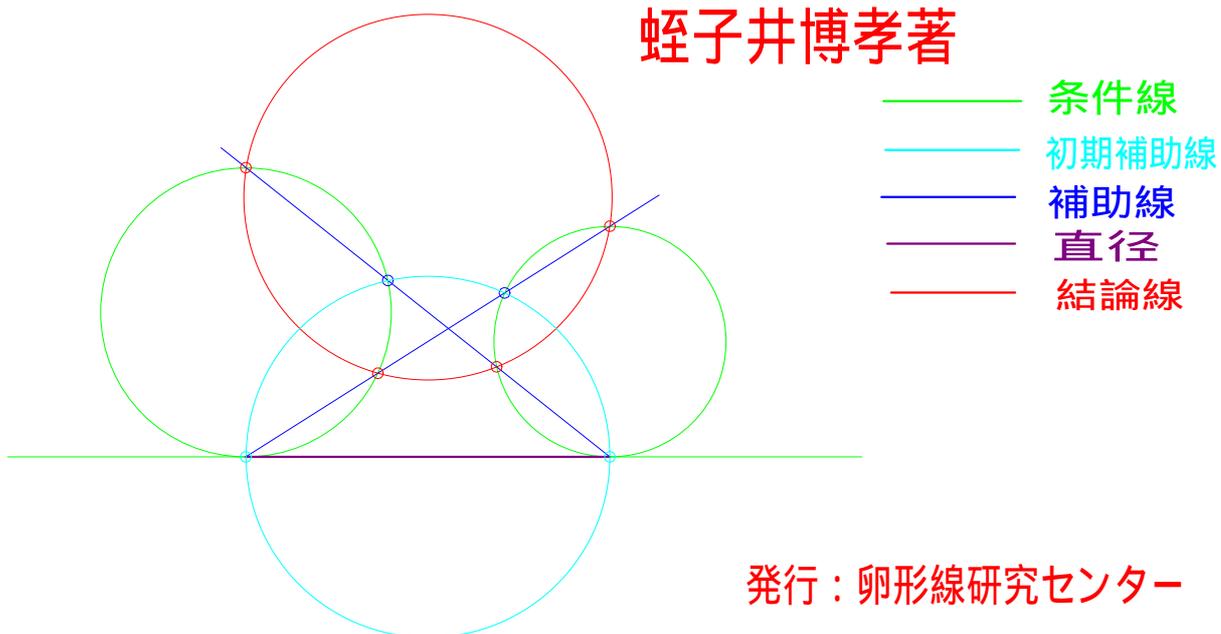


by 蛭子井博孝

# 幾何創作 ロリーの花

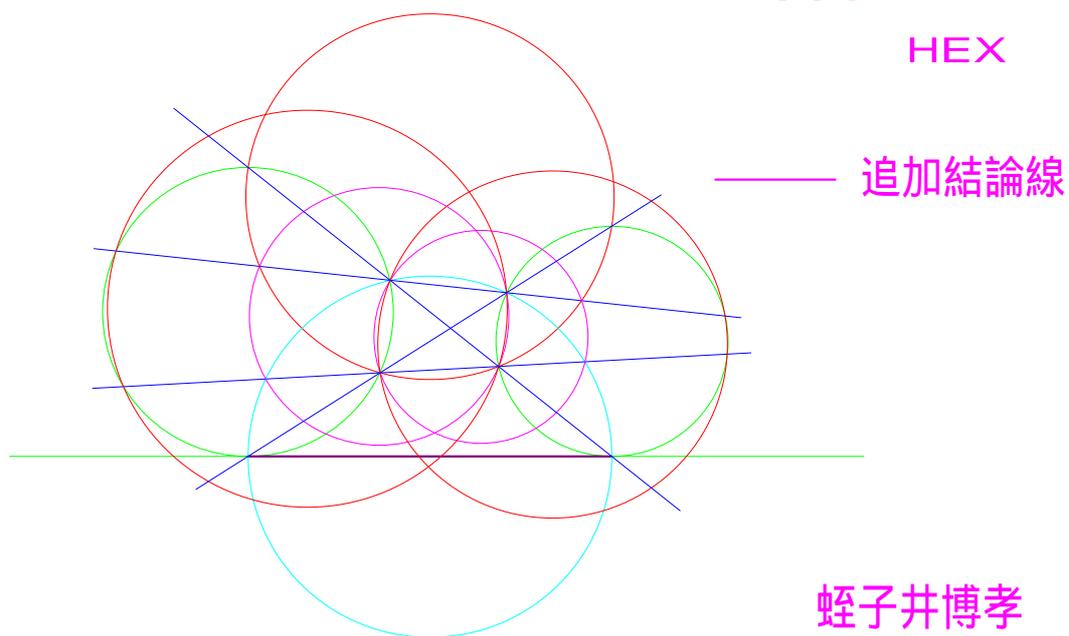
HI-175

蛭子井博孝著



2009-2-7

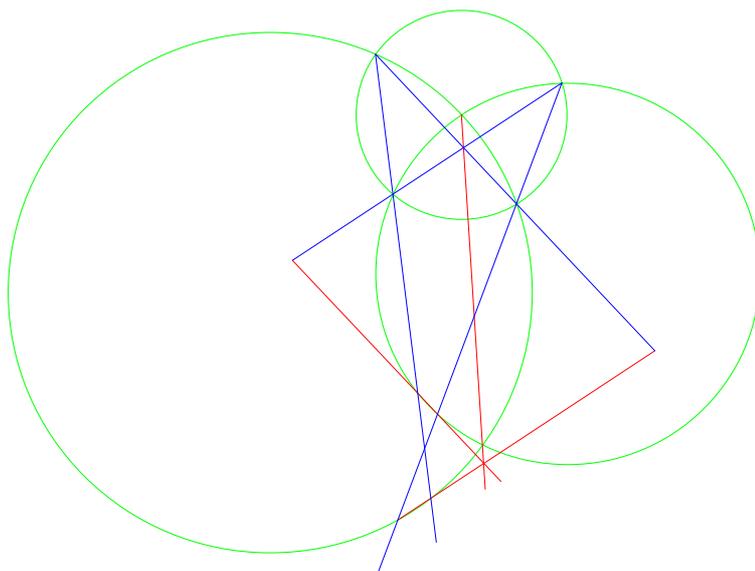
HEX



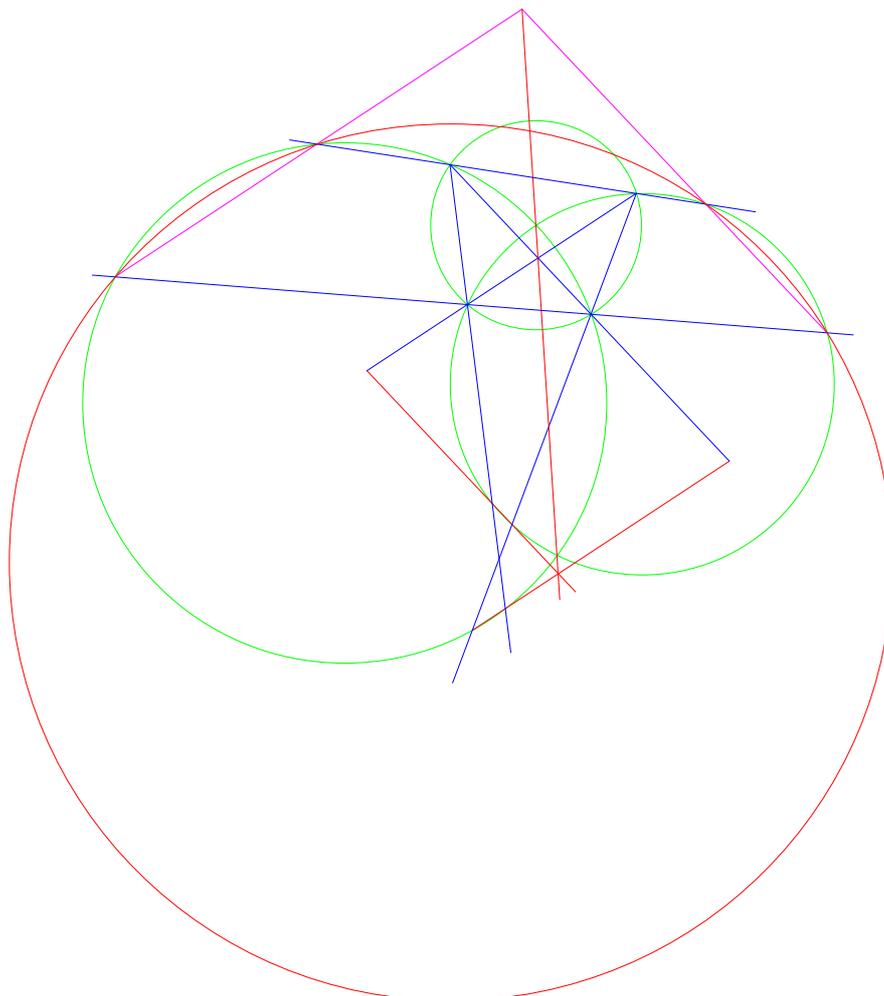
# 1-13-1 2円交点円 平行共点

HI-176

2008-2-13



by 蛭子井博孝



2009-2-7

HEX

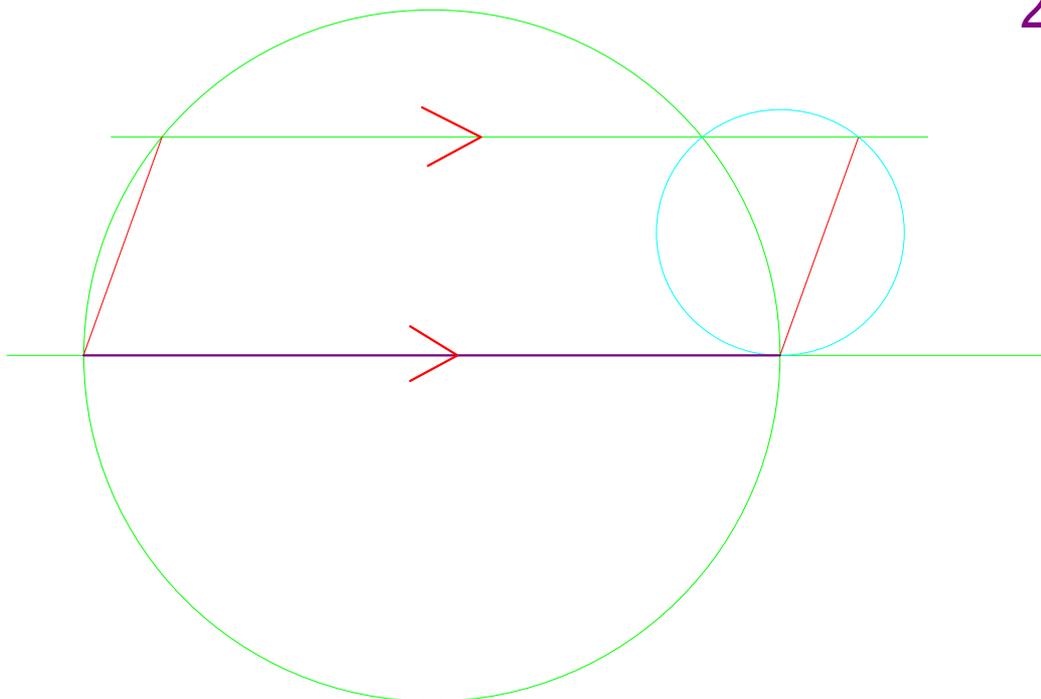
蛭子井博孝

2-13-2 平行線直径円

平行

HI-177

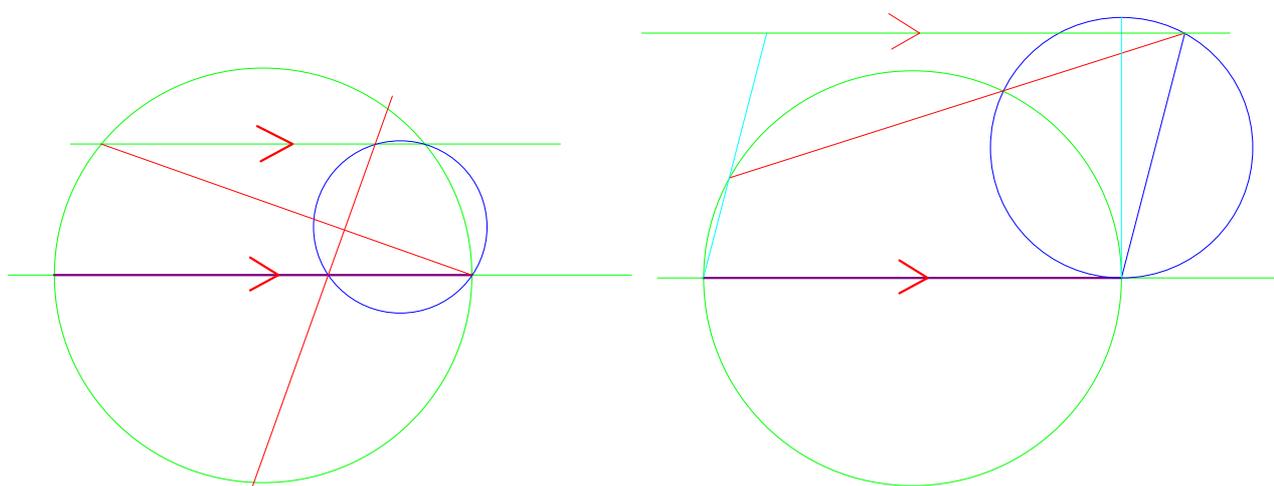
2008-2-13



by 蛭子井博孝

2009-2-7

HEX

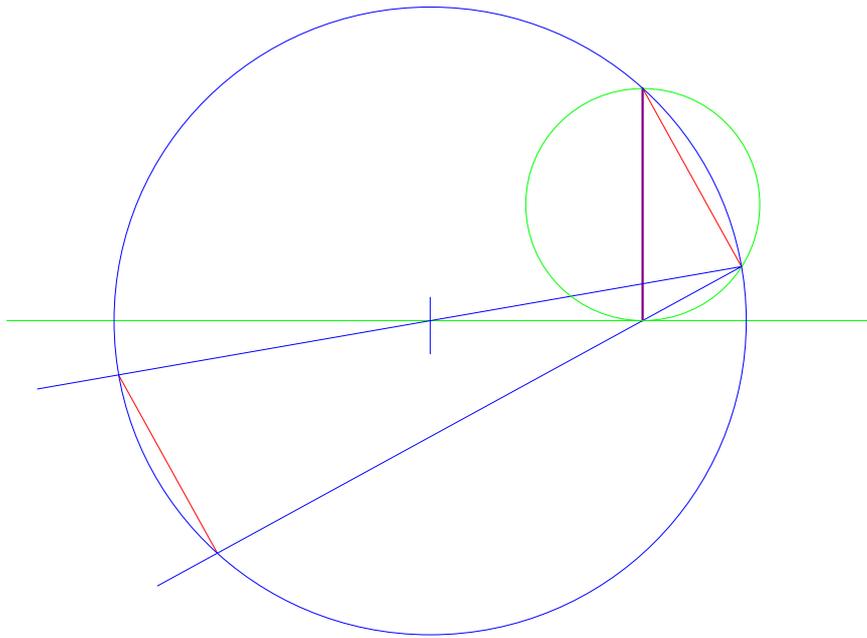


蛭子井博孝

2-13-3 接円 平行

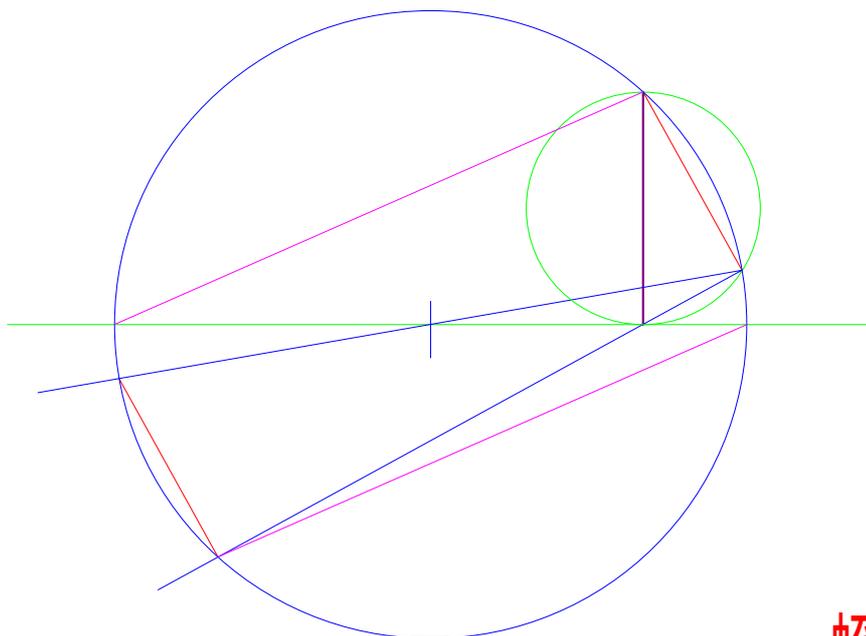
HI-178

2008-2-13



by 蛭子井博孝

2009-2-7



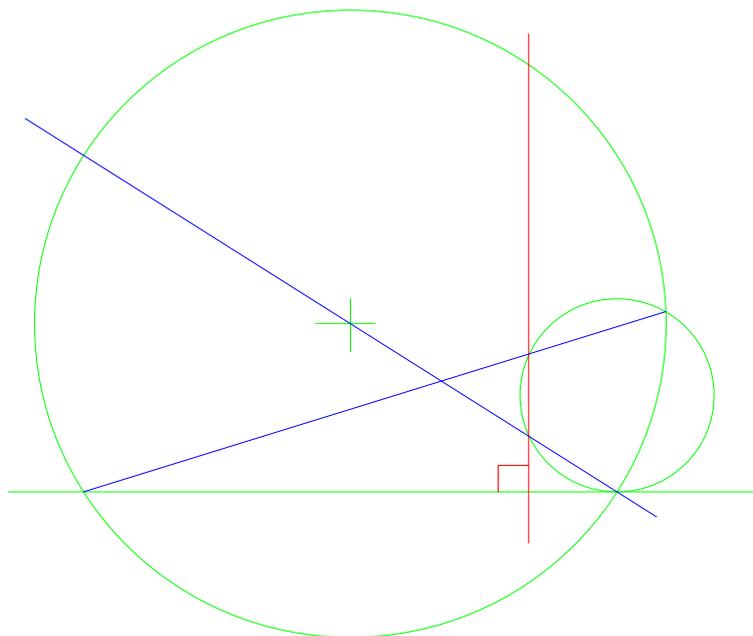
蛭子井博孝

証

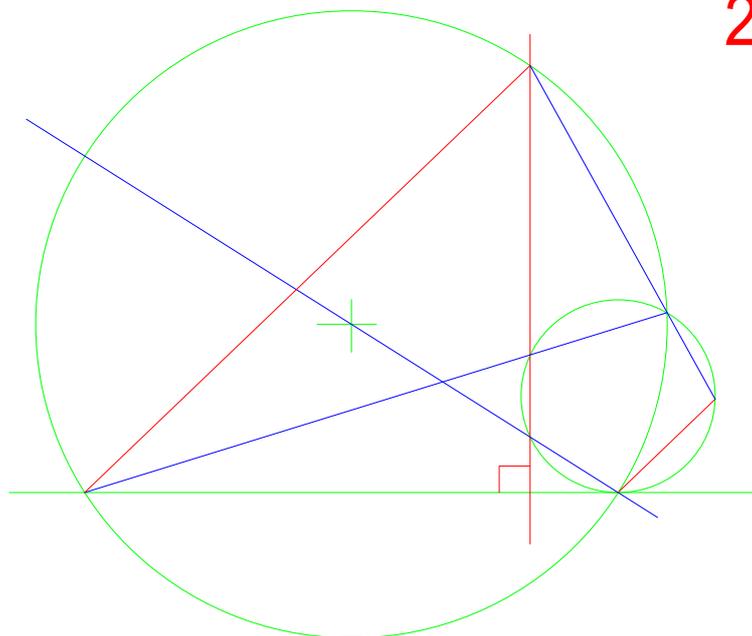
HI-179

2-13-5 接円 直交

2008-2-13



by 蛭子井博孝



2009-2-7

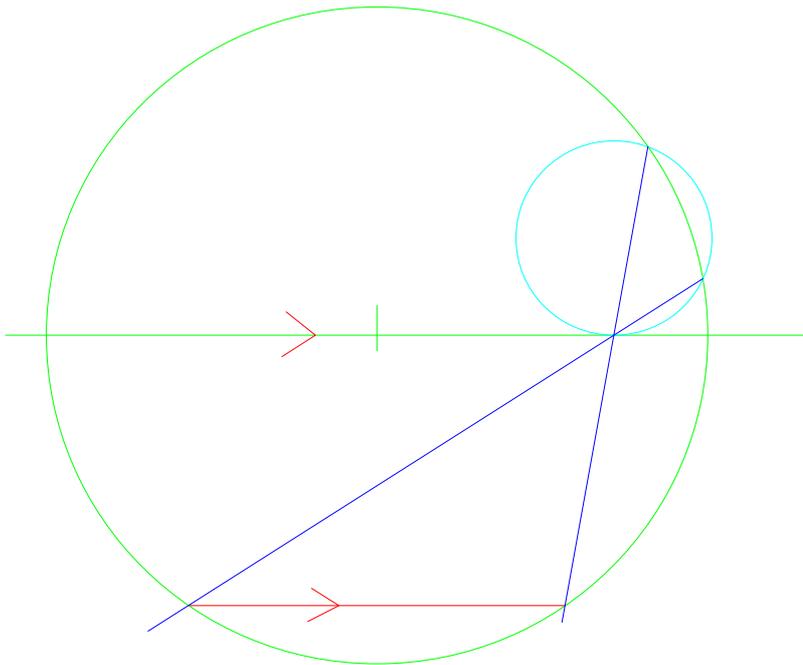
蛭子井博孝

証

2-13-4 接円 平行2

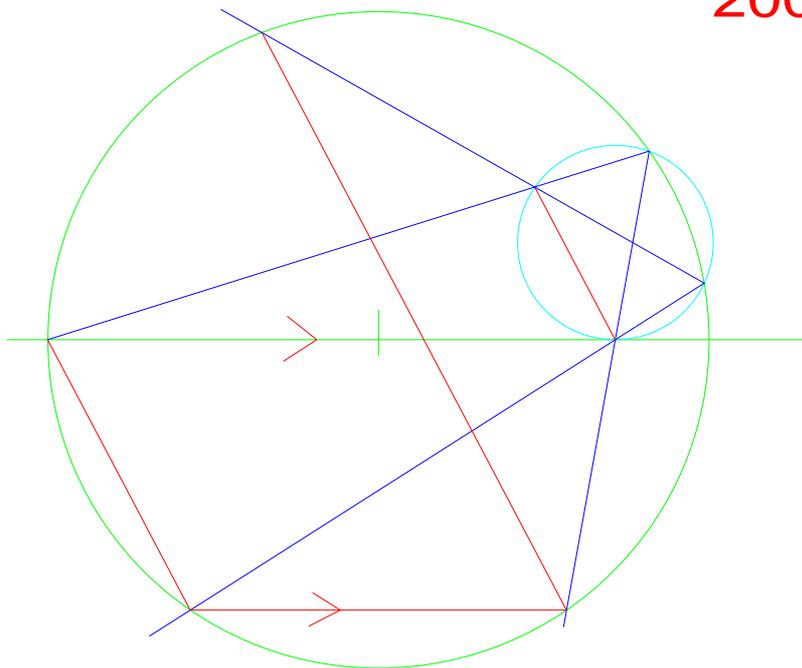
HI-180

2008-2-13



by 蛭子井博孝

2009-2-7



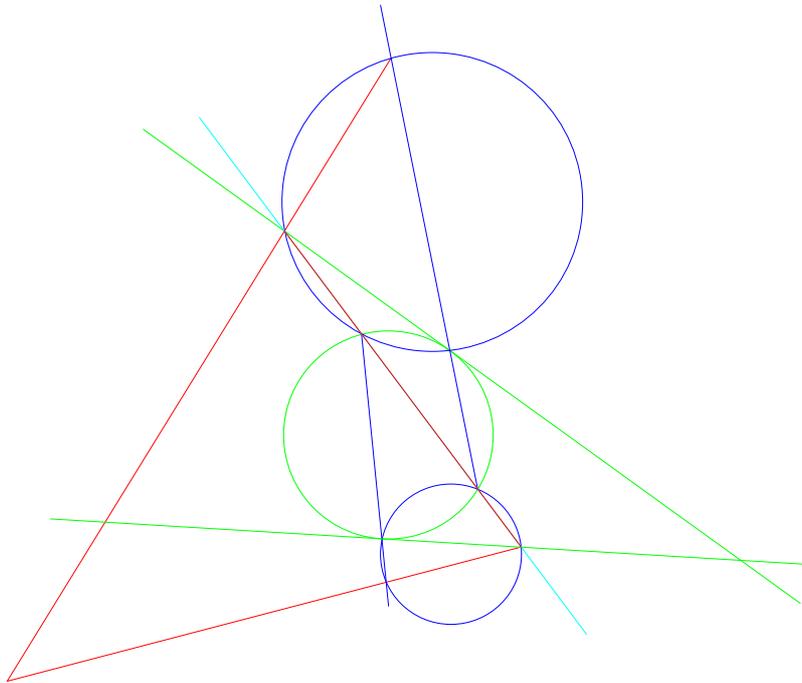
蛭子井博孝

証

HI-181

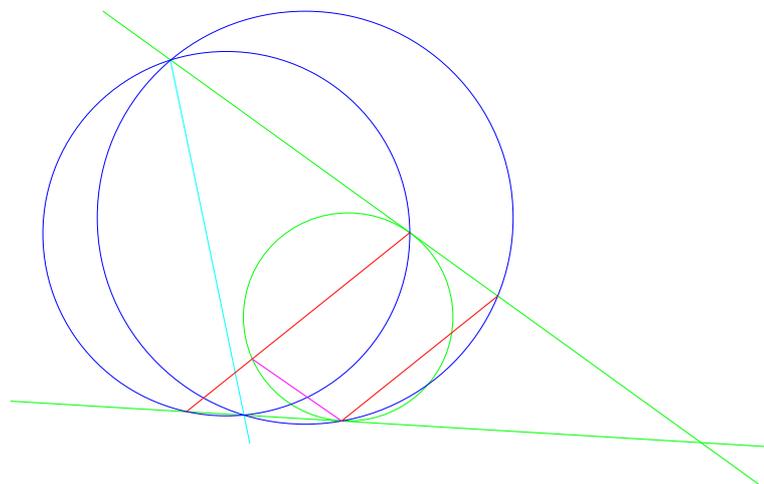
円に接する2直線の2等辺三角形定理

2008-2-14



蛭子井博孝

2009-2-7

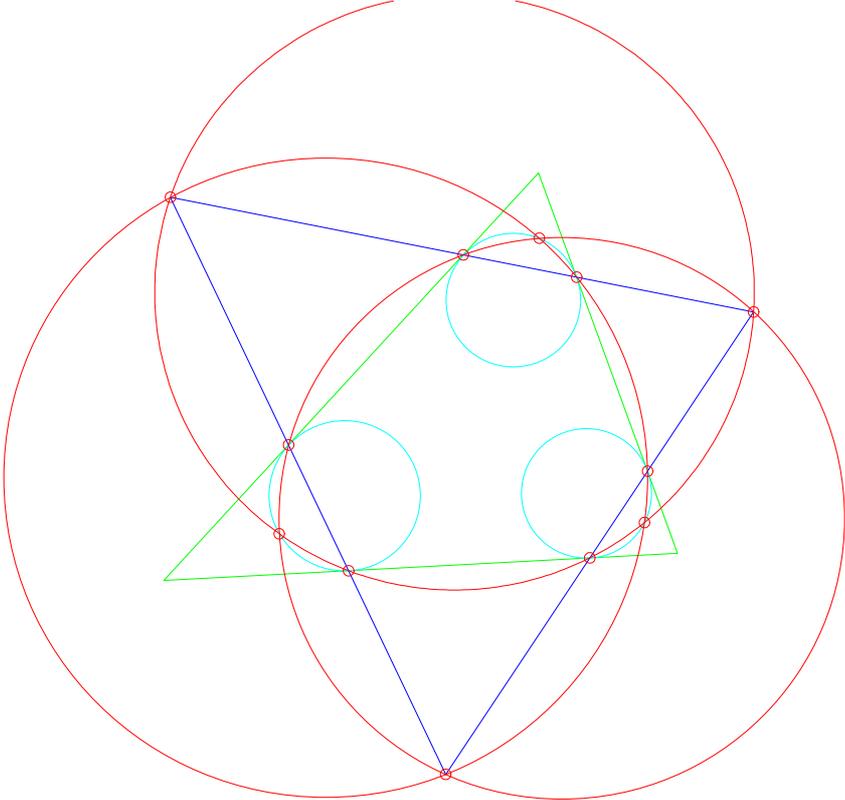


蛭子井博孝

2-14-2 三角形3接円 共円共点定理

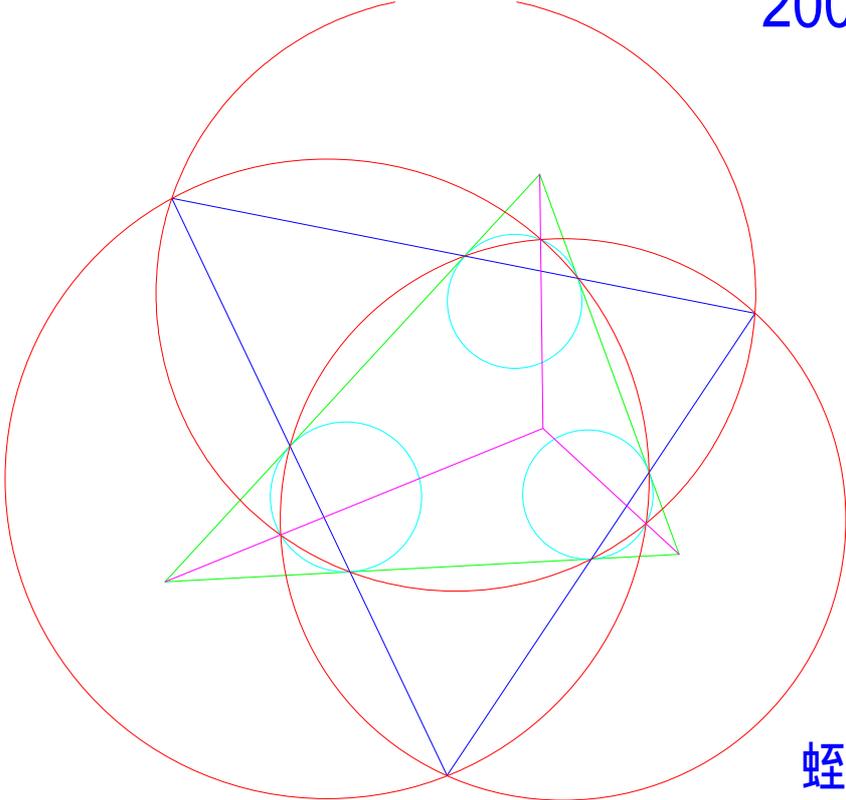
HI-182

2008-2-14



蛭子井博孝

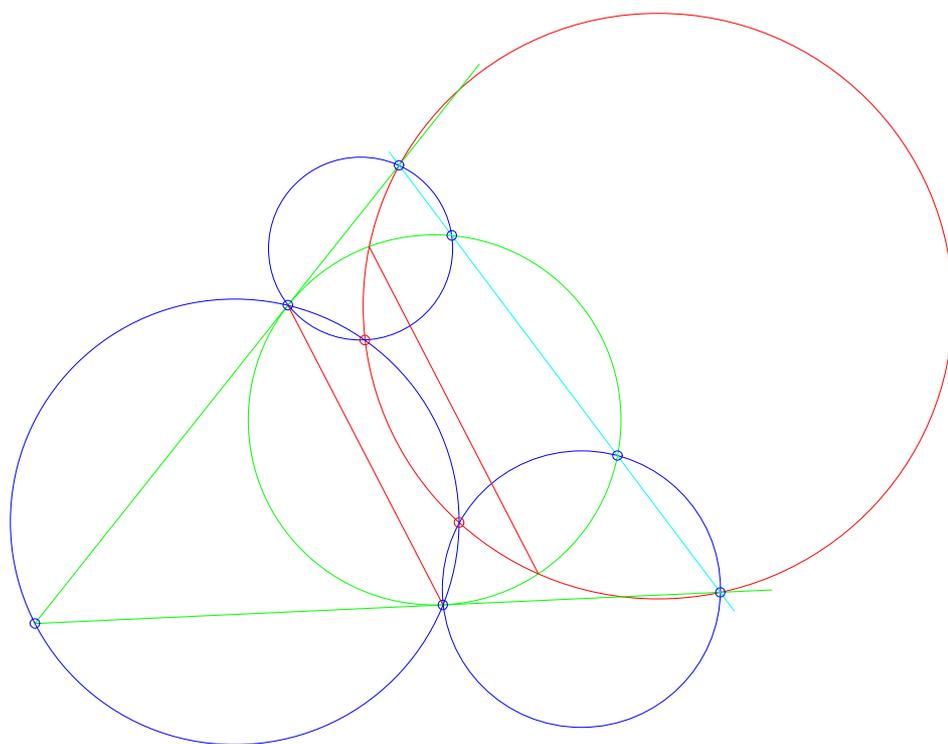
2009-2-7



蛭子井博孝

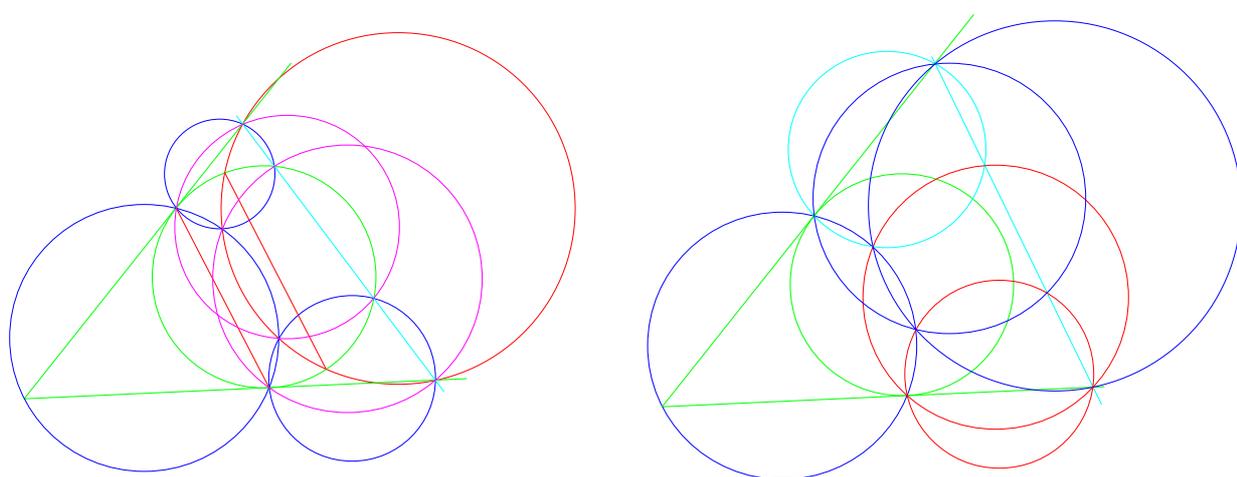
# 円に接する2直線の一直線による共円平行定理 HI-183

2008-2-14



蛭子井博孝

2009-2-7

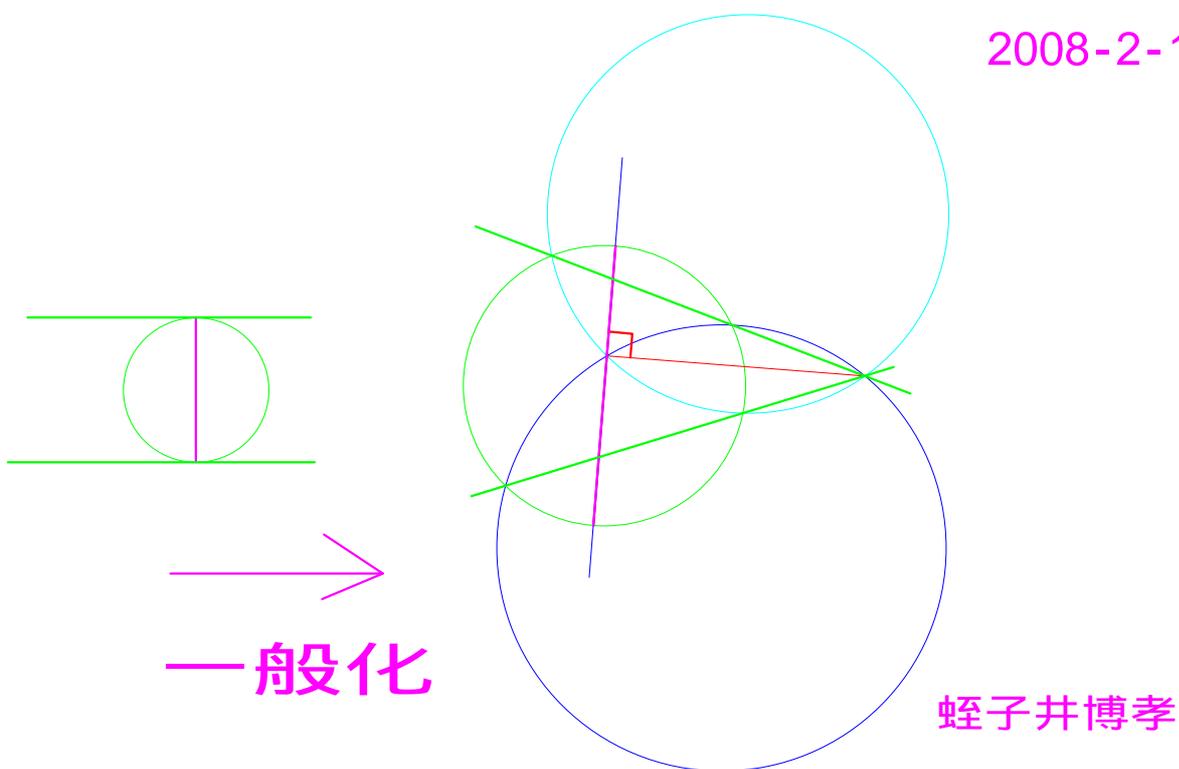


蛭子井博孝

# 円と2直線の直径

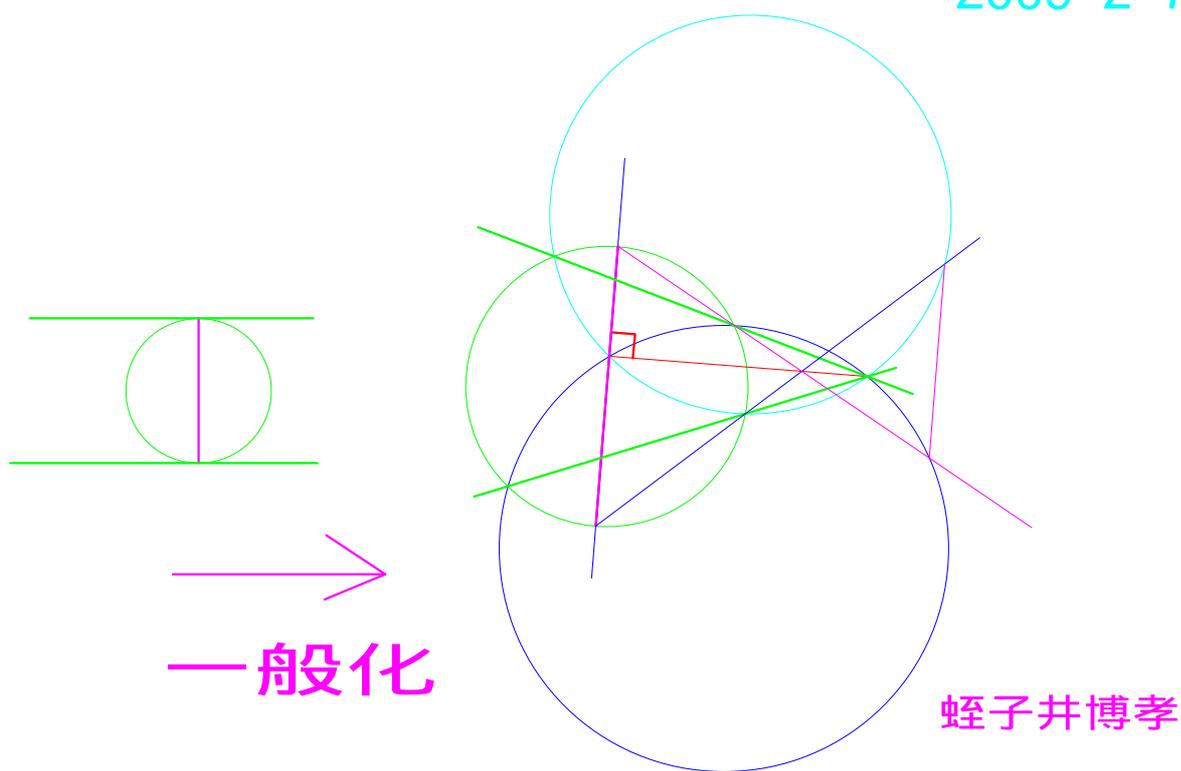
HI-184

2008-2-14



蛭子井博孝

2009-2-7

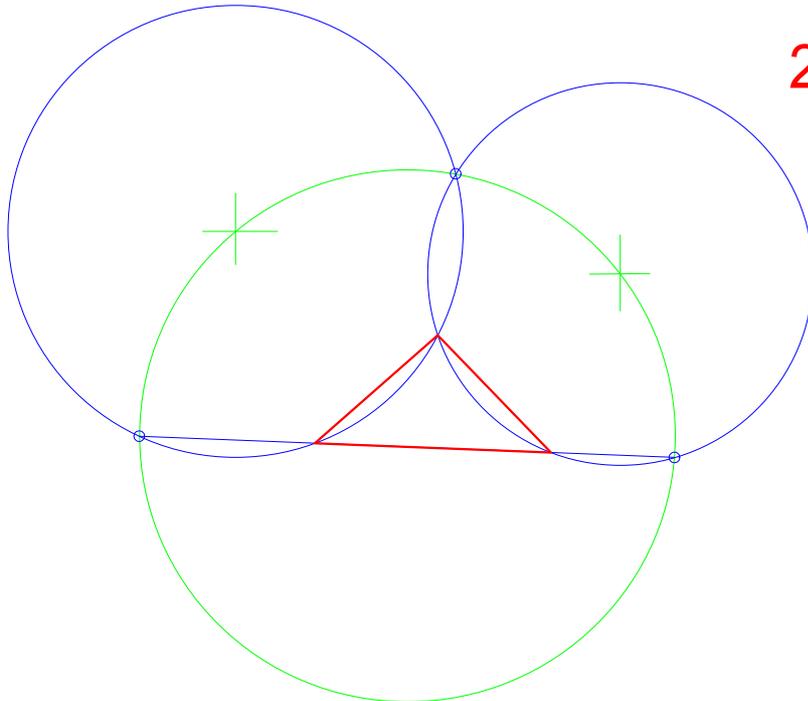


蛭子井博孝

円周上で交わり、中心を持つ2円の二等辺三角形定理

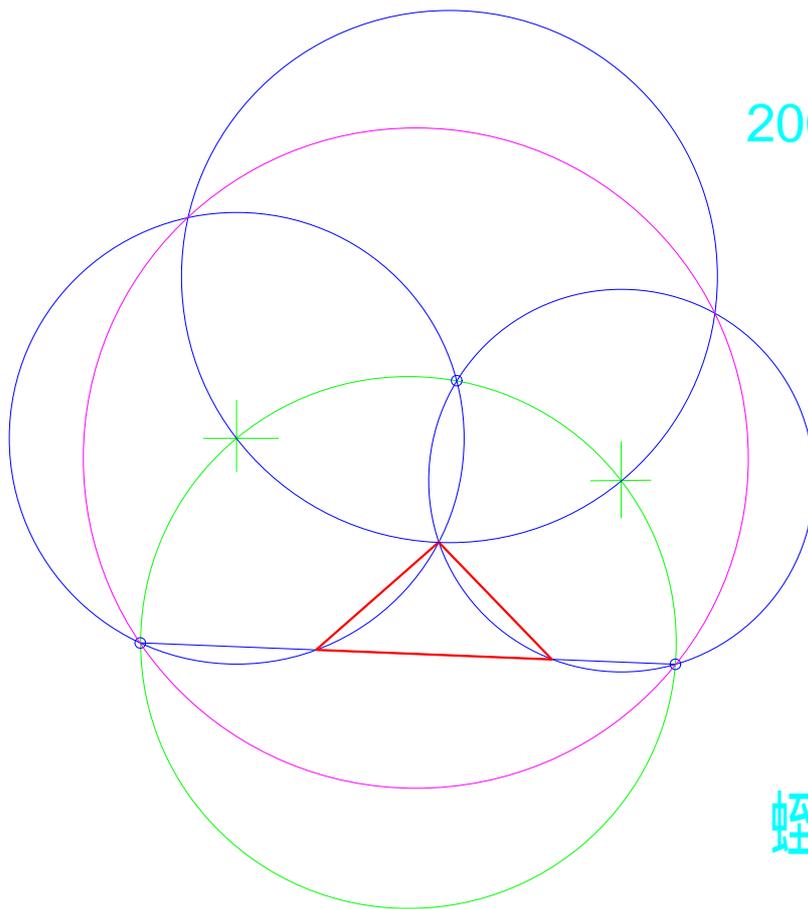
HI-185

2008-2-14



蛭子井博孝

2009-2-7

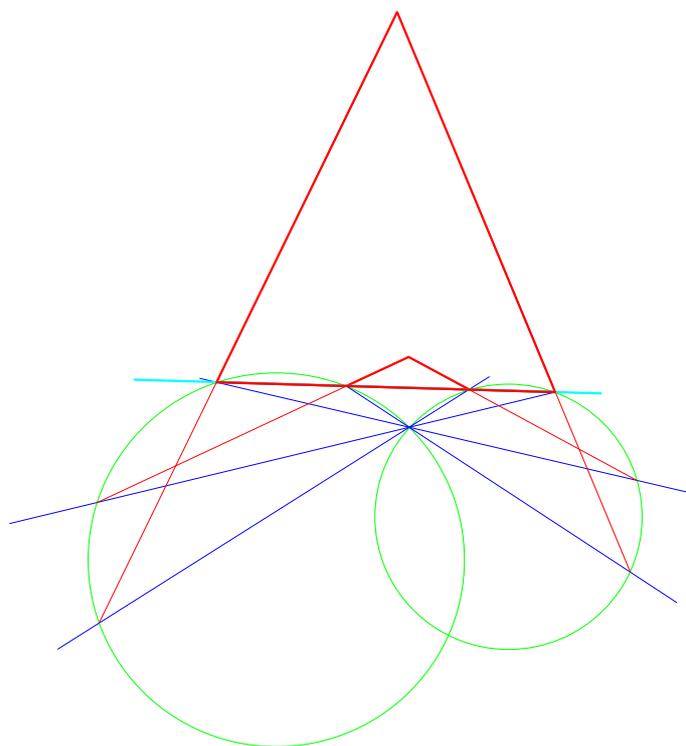


蛭子井博孝

# 2円と1直線の大小2等辺三角形

HI-186

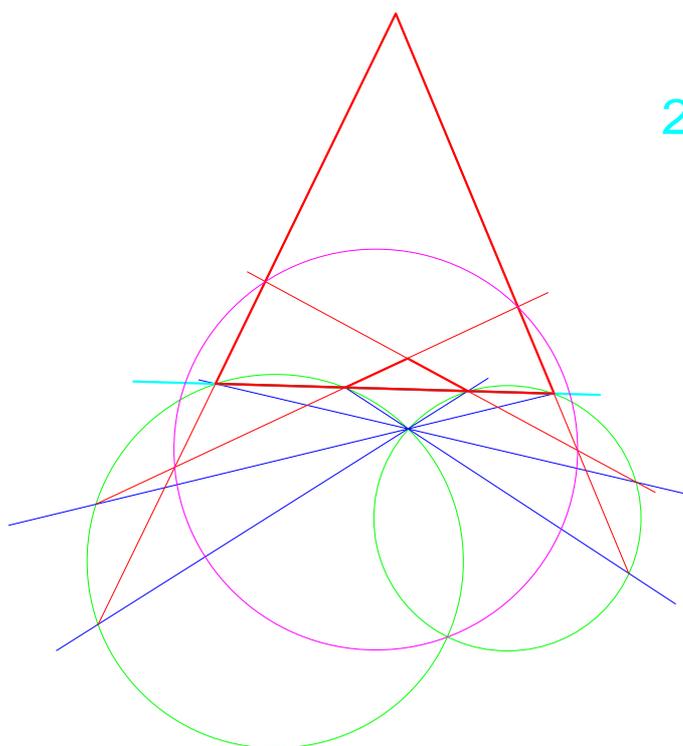
2008-2-14



蛭子井博孝

2009-2-7

HEX

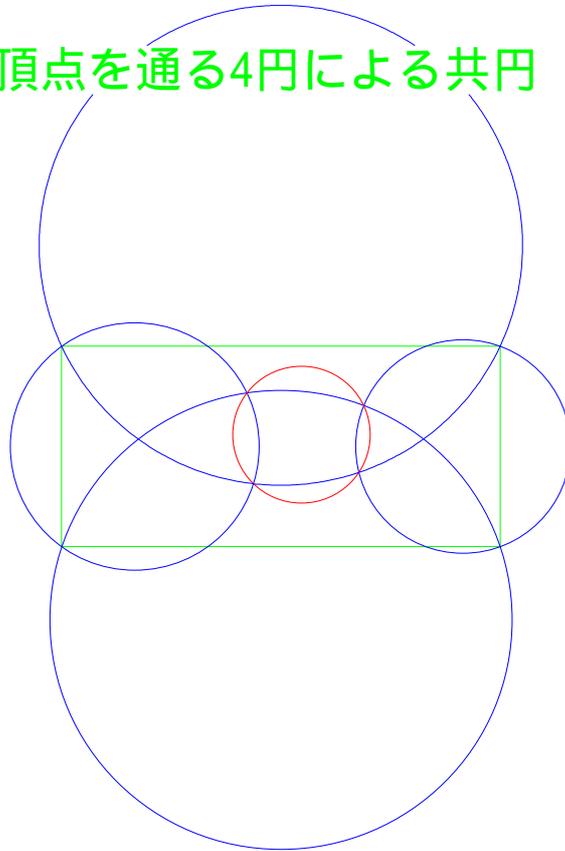


蛭子井博孝

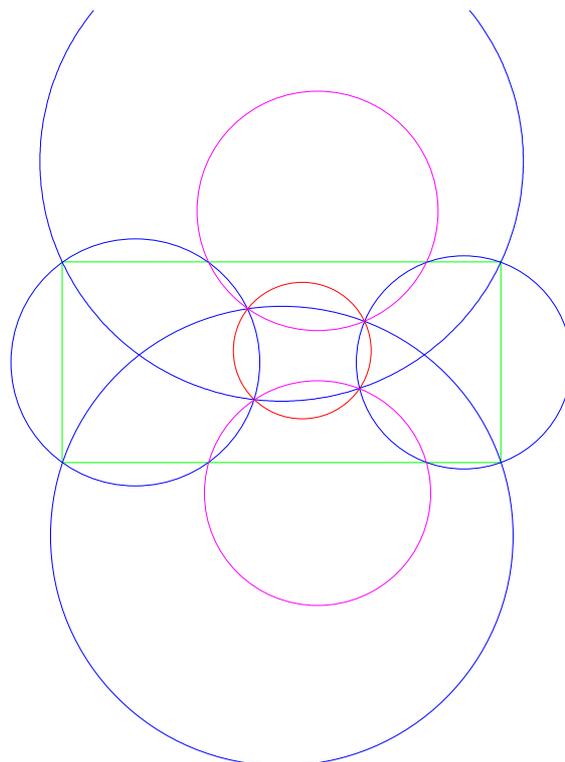
長方形と2頂点を通る4円による共円

HI-187

2008-2-14



蛭子井博孝



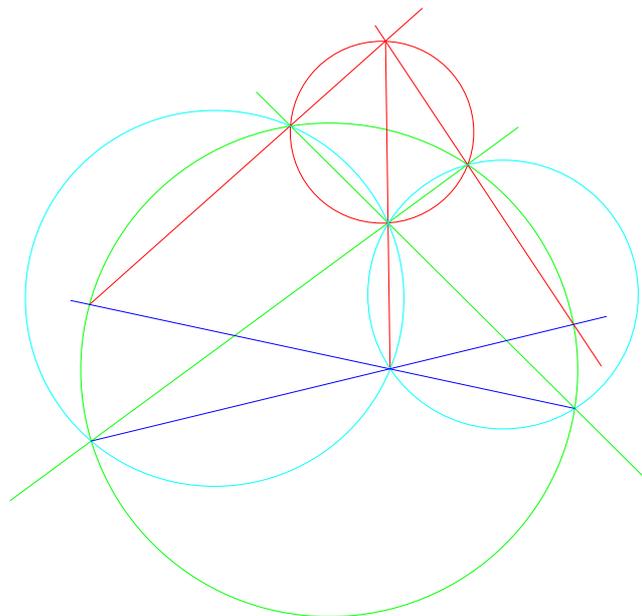
2009-2-7

蛭子井博孝

HI-188

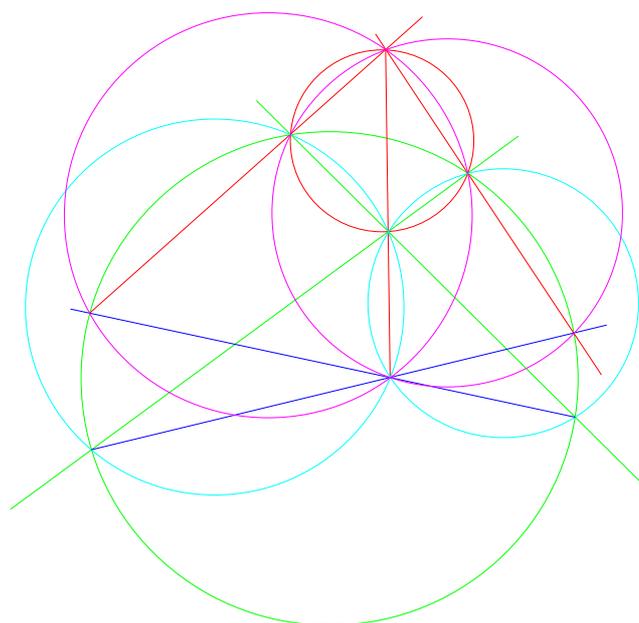
円と2直線 共点定理

2008-2-15



蛭子井博孝

2009-2-7



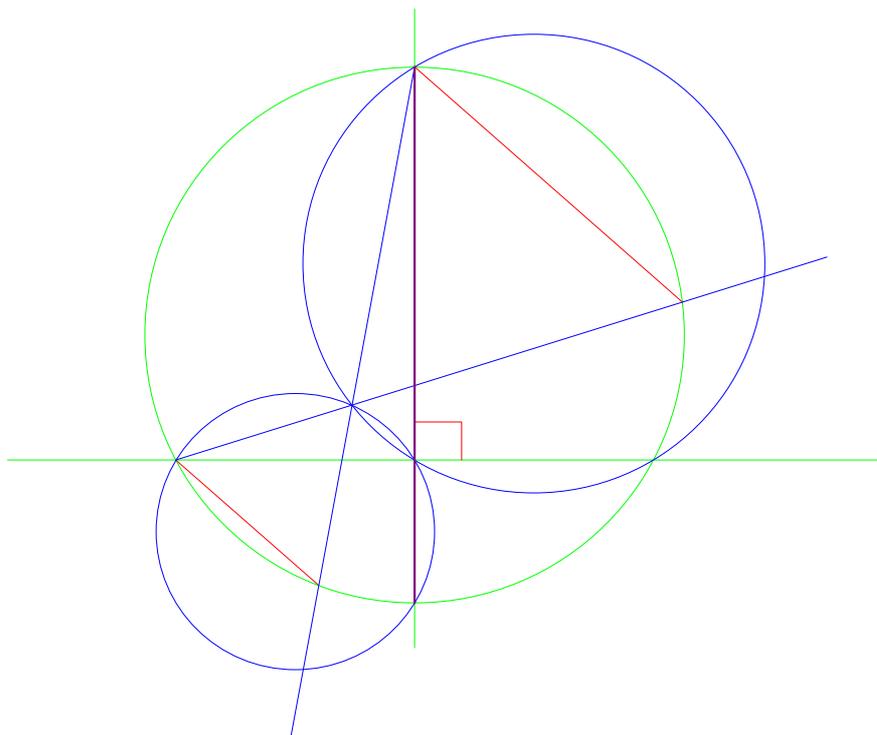
蛭子井博孝

落ち穂拾い

HI-189

## 2-15-2 円の直径の直交線 平行定理

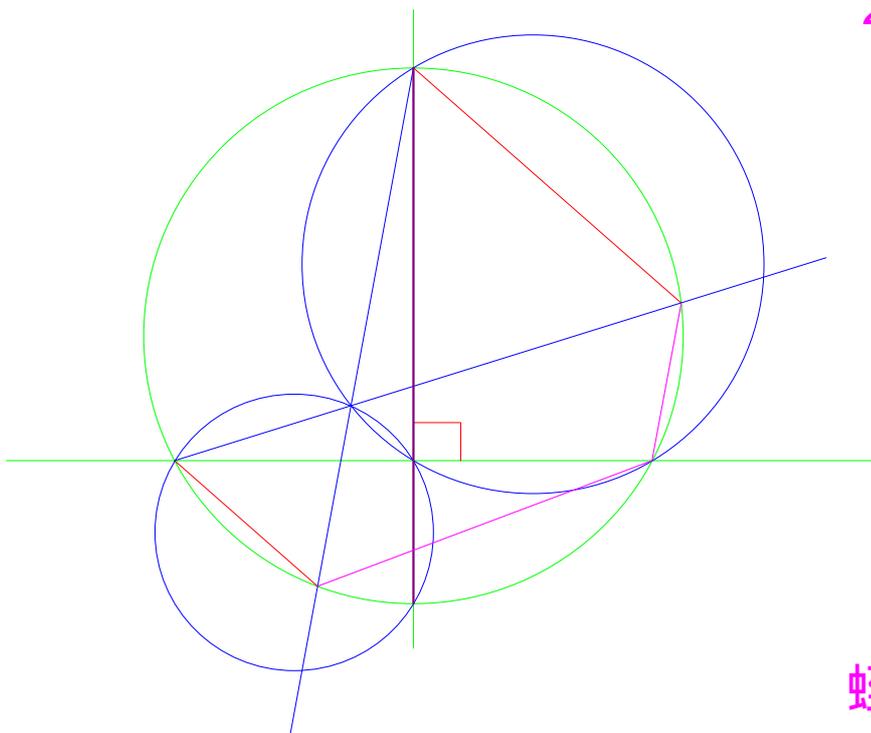
2008-2-15



蛭子井博孝

## 平行の冥利

2009-2-7

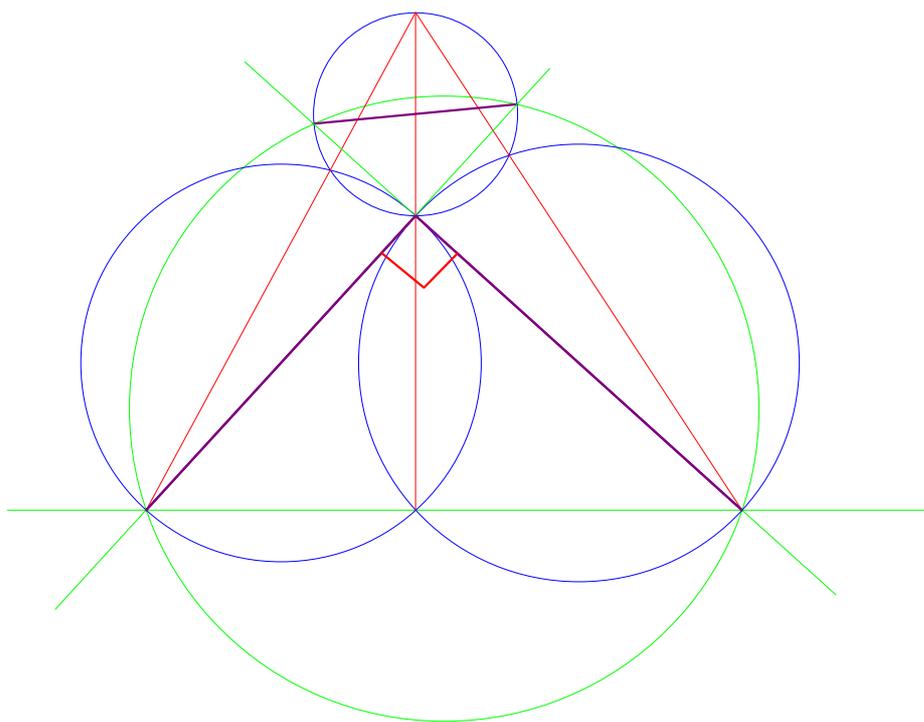


蛭子井博孝

# 2-15-3 円と3つの直径円 共点定理

HI-190

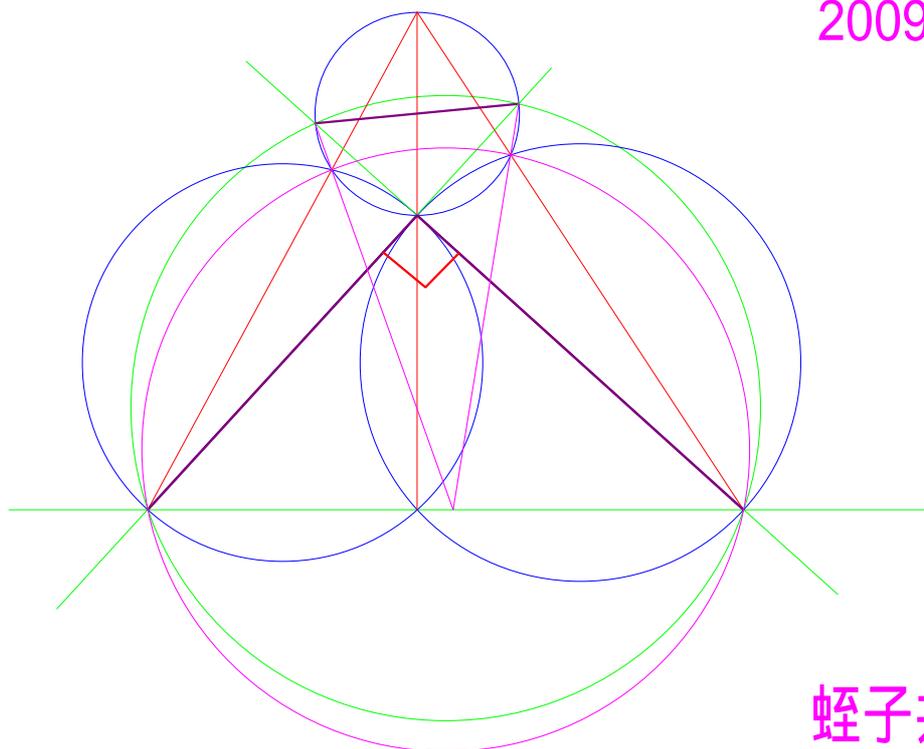
2008-2-15



蛭子井博孝

# 共円の愛理

2009-2-7

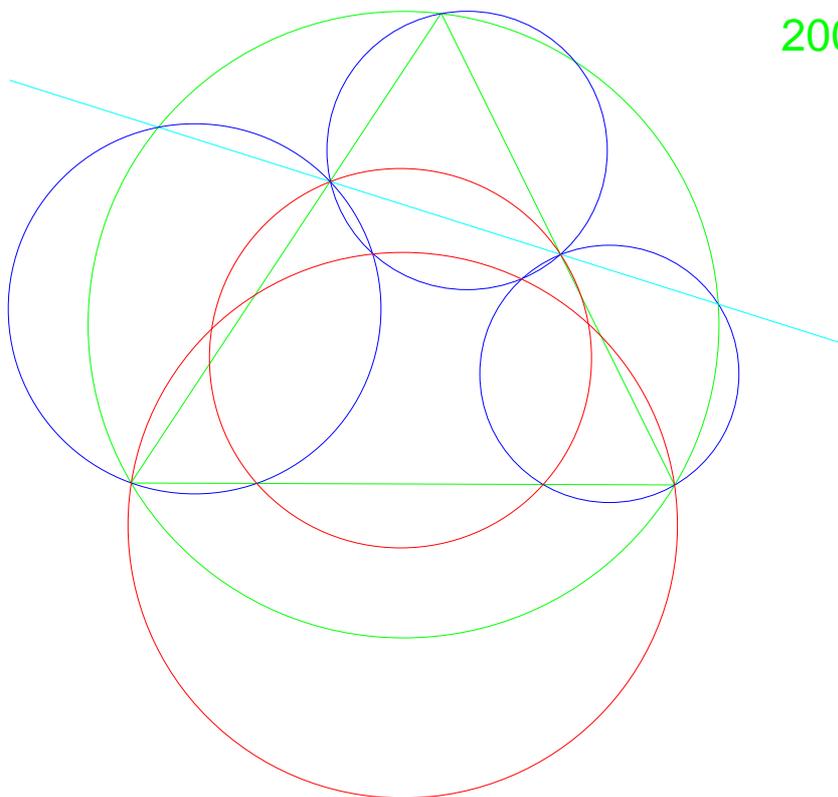


蛭子井博孝

# 円と三角形と直線 共円定理

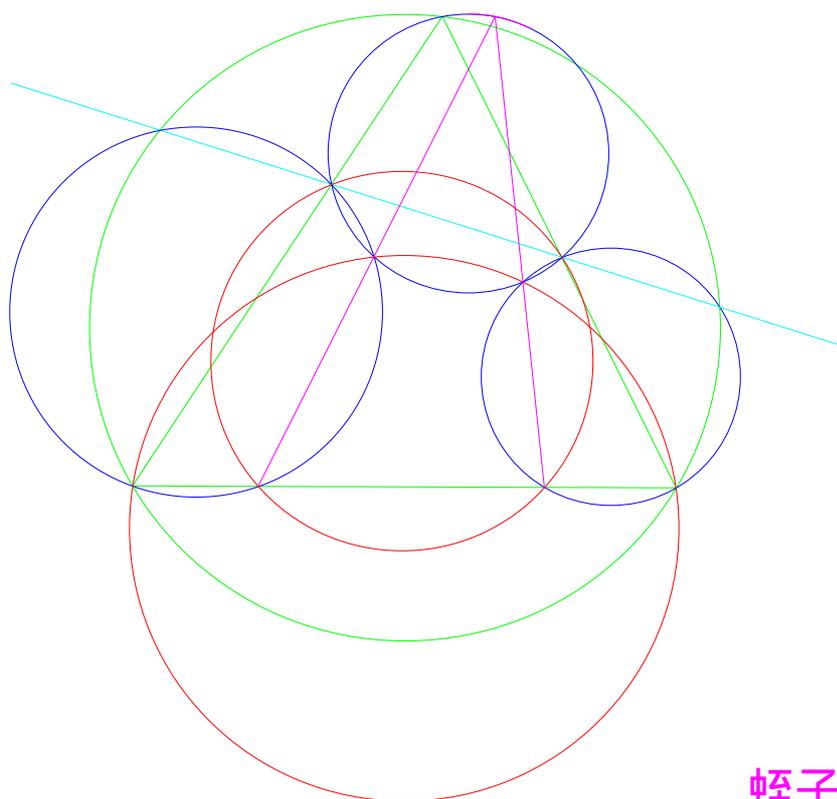
HI-191

2008-2-15



蛭子井博孝

2009-2-7



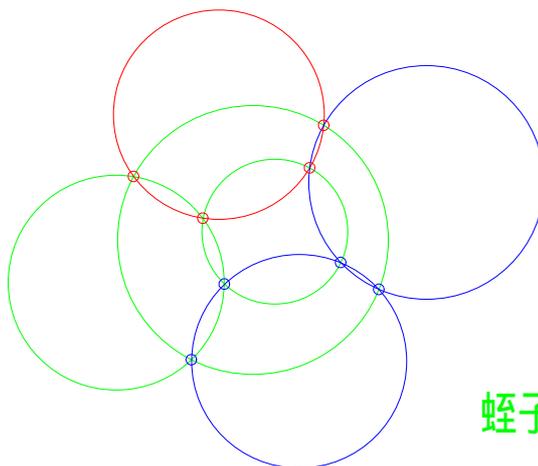
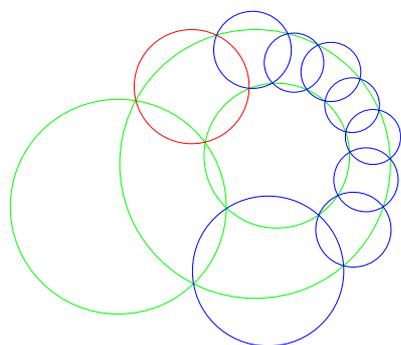
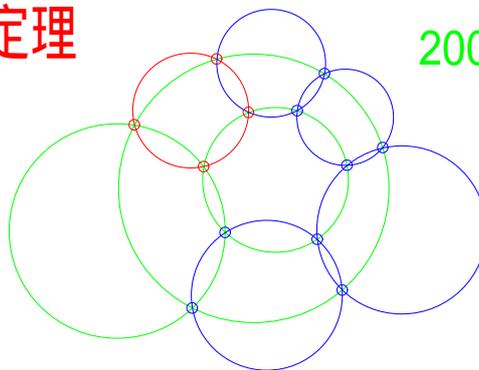
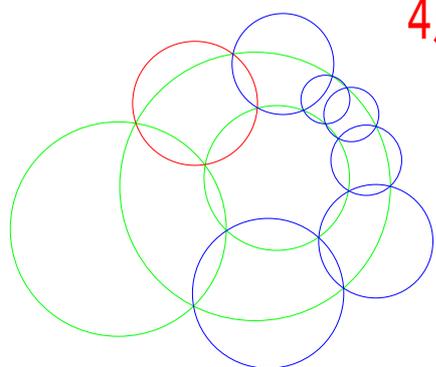
蛭子井博孝

# 2円偶数円の定理

HI-192

## 4点の共円定理

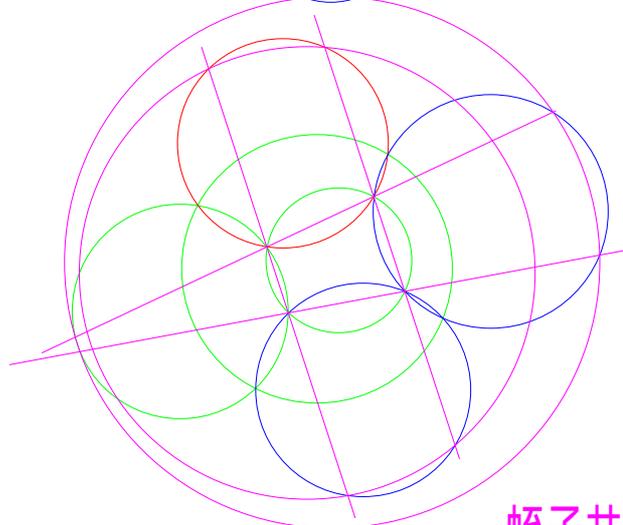
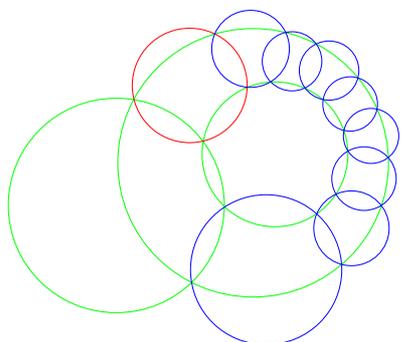
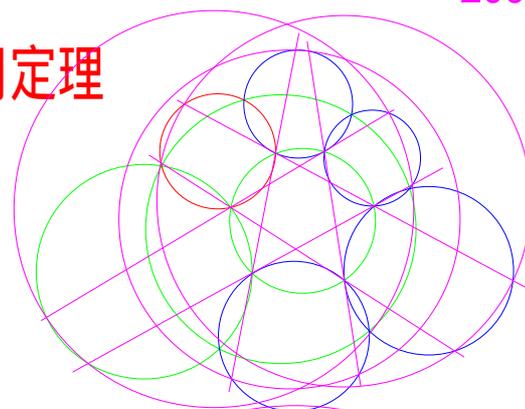
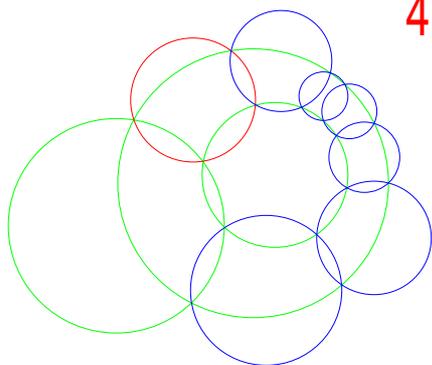
2008-2-16



蛭子井博孝

2009-2-7

## 4点の共円定理



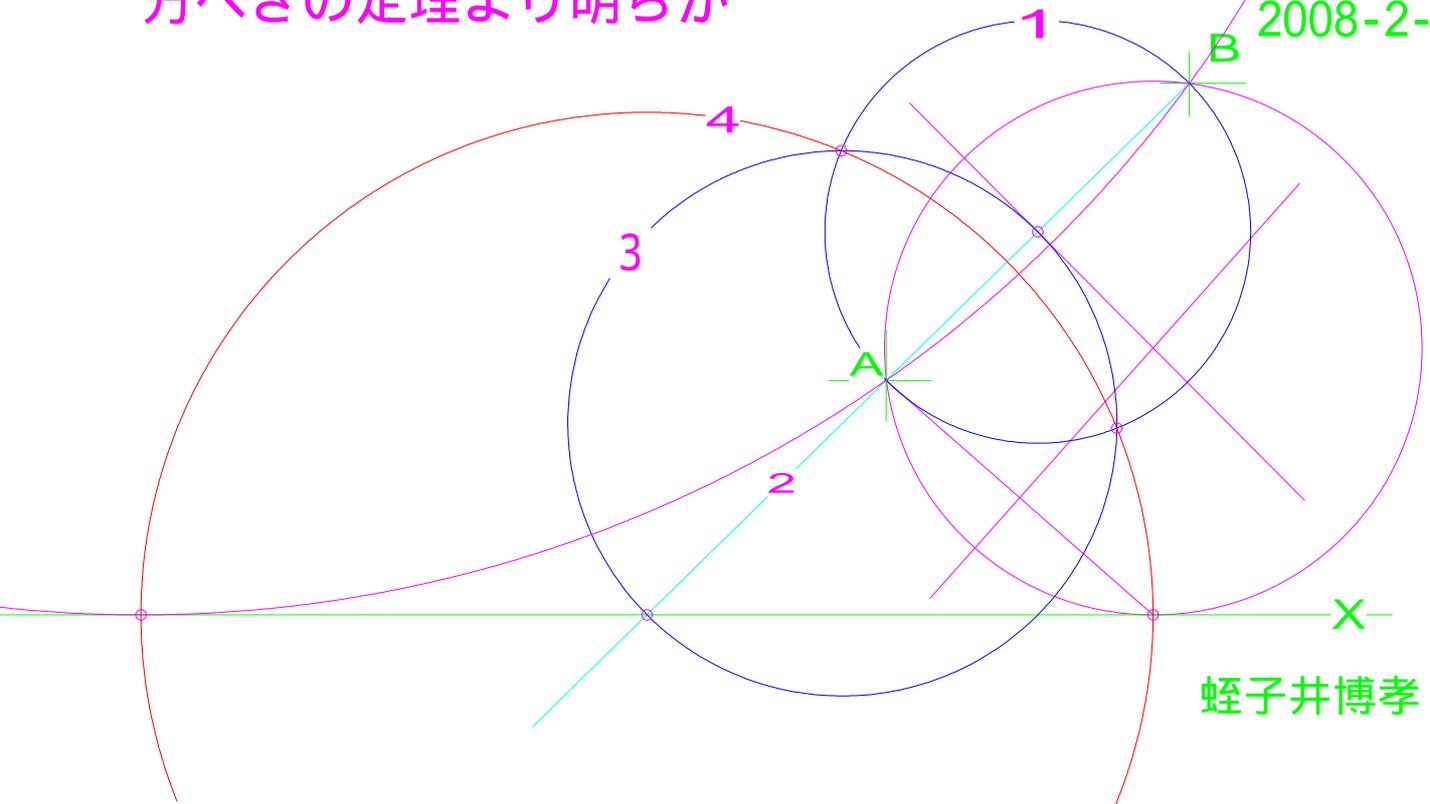
蛭子井博孝

任意の2点A, Bから、任意の直線Xに接円を引くこと。その作図法

HI-193

方べきの定理より明らか

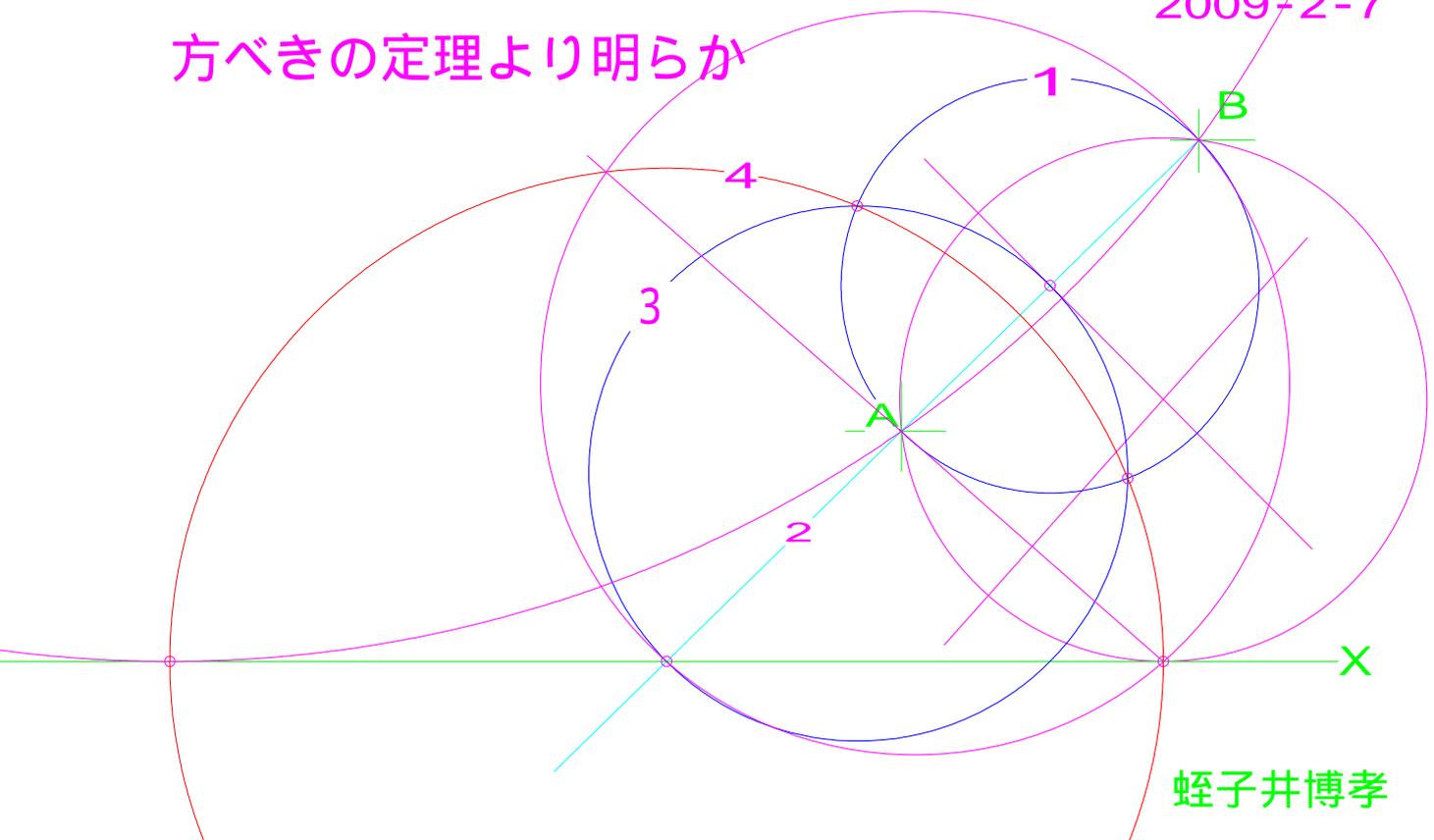
2008-2-16



蛭子井博孝

方べきの定理より明らか

2009-2-7

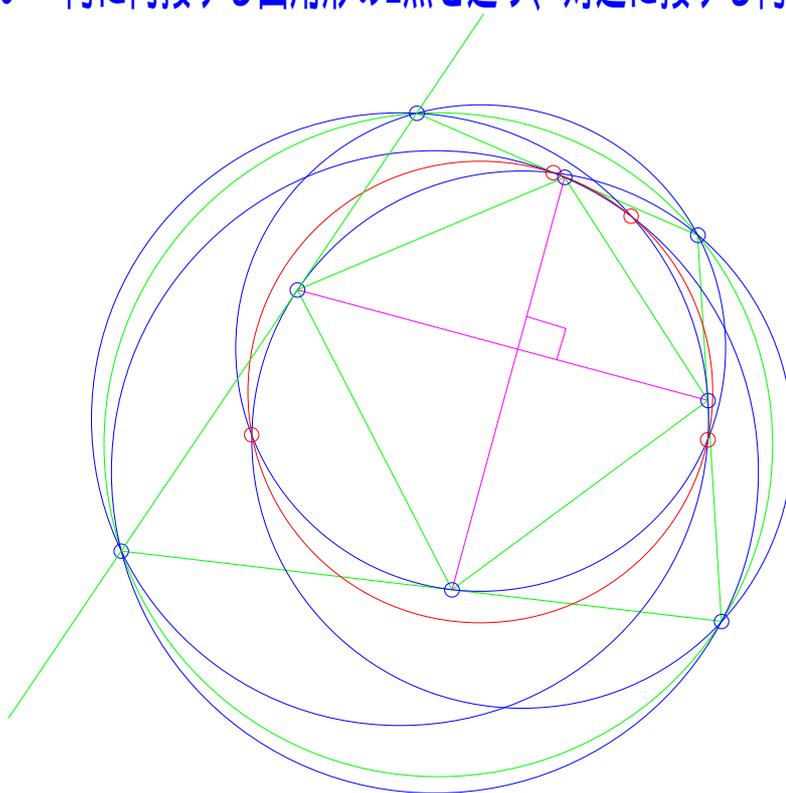


蛭子井博孝

2-16-3 円に内接する四角形の2点を通り、対辺に接する円の定理

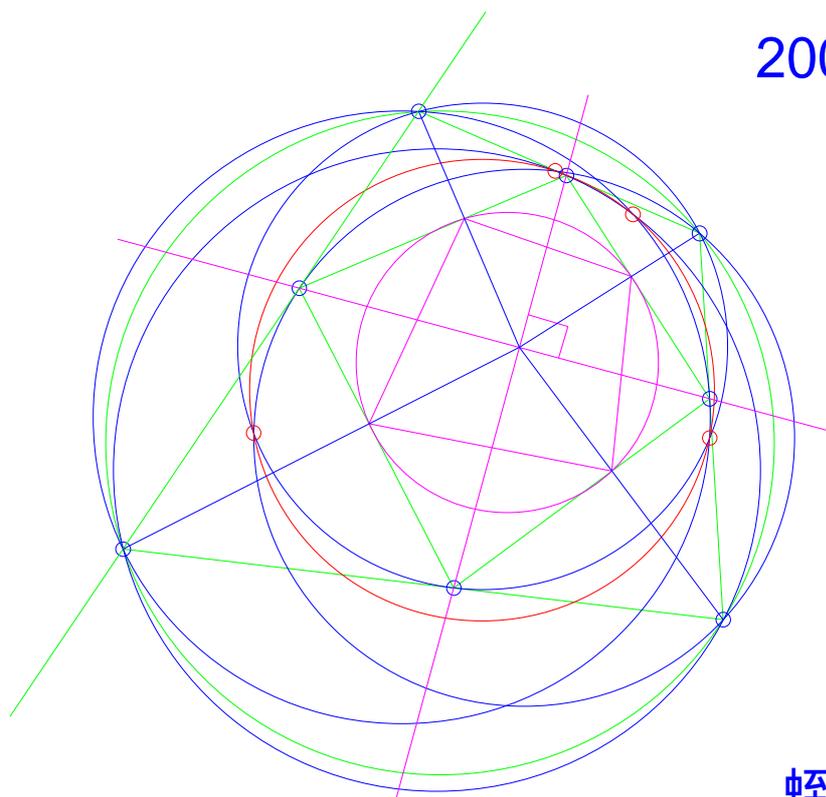
HI-194

2008-2-16



蛭子井博孝

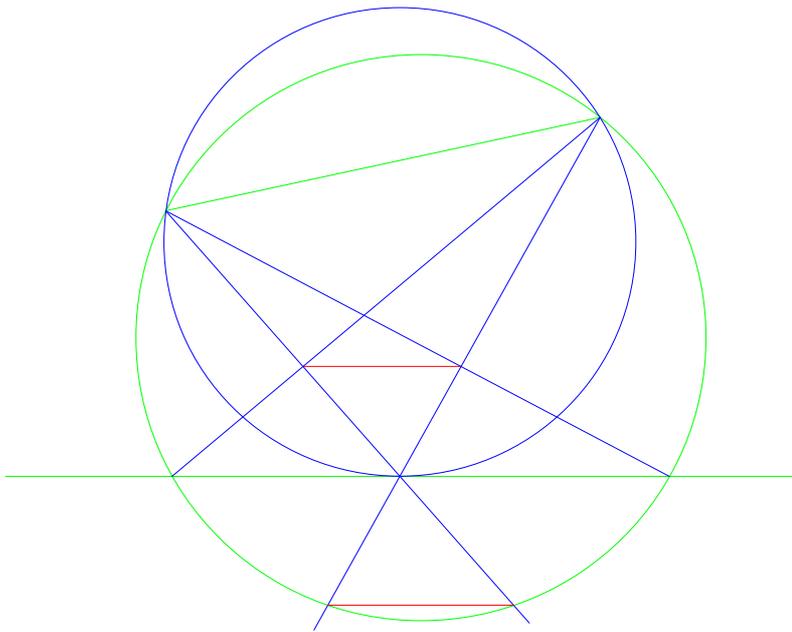
2009-2-7



蛭子井博孝

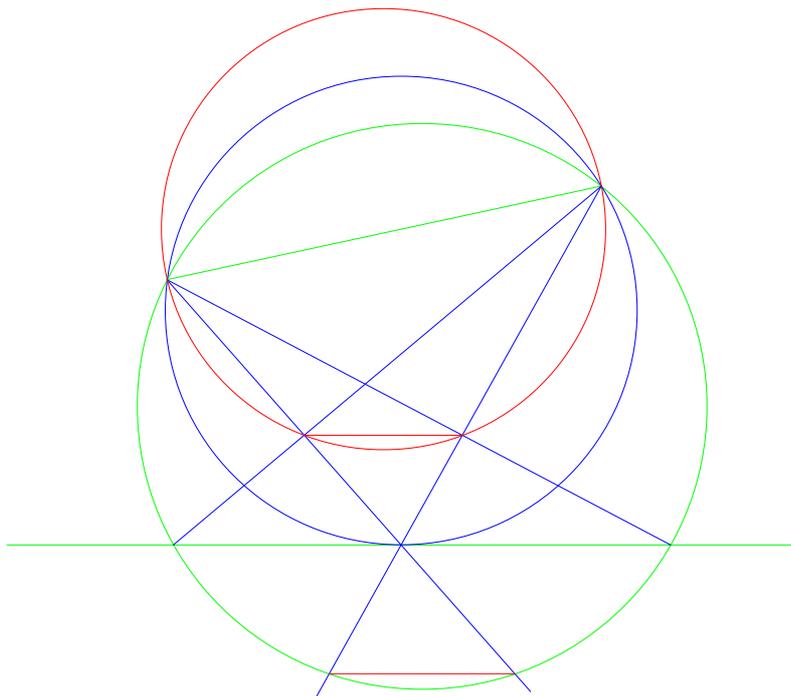
2-16-5 接円の平行問題

2008-2-16



蛭子井博孝

2009-2-7



蛭子井博孝

HI-196

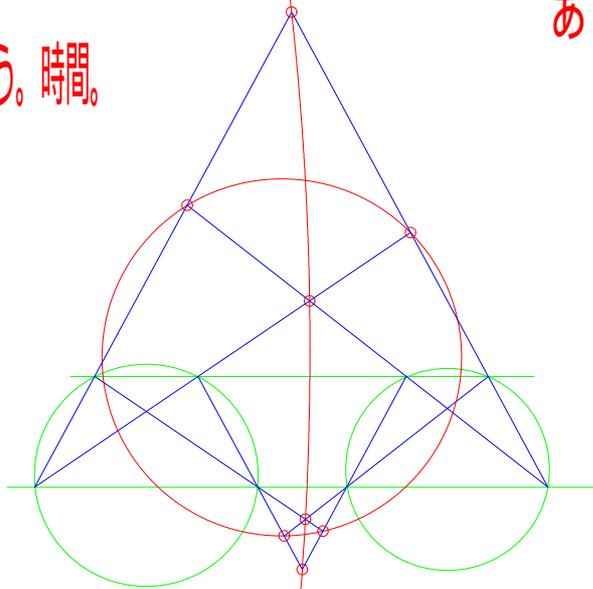
2008-2-17

平行線でないと成り立たない、小さくならない共円

小さな円もできました。ありがとう。時間。

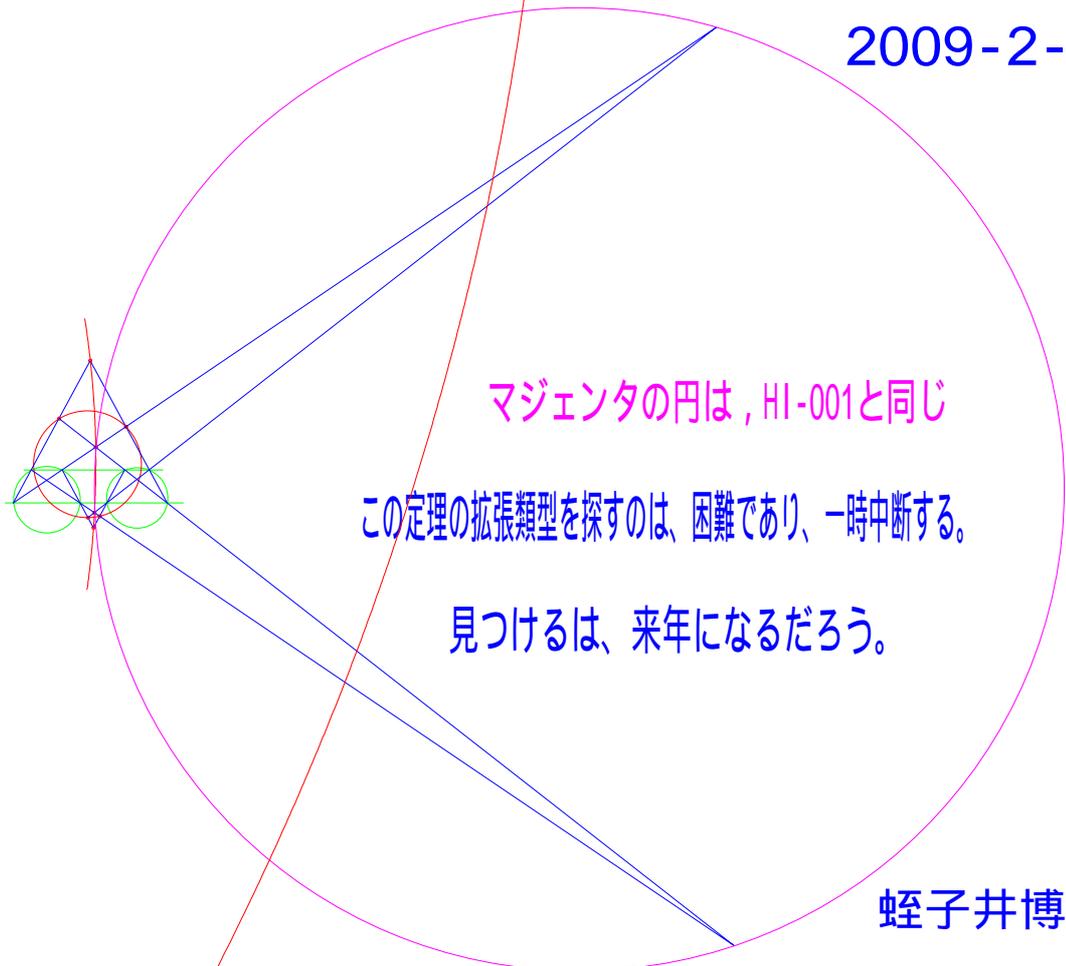
ありガット宇平行線

円と縁だ



蛭子井博孝

2009-2-7



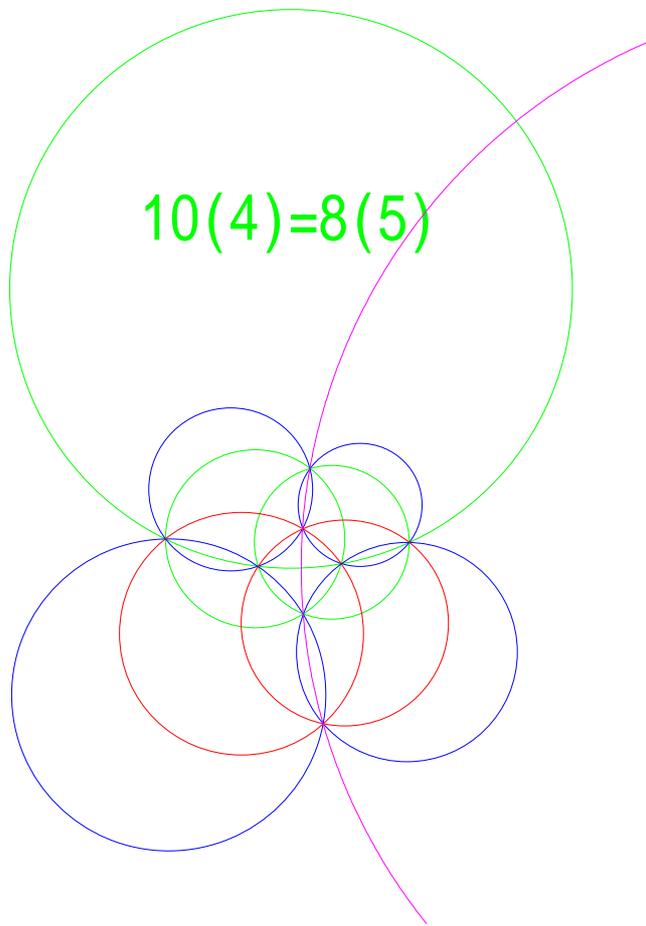
マジェンタの円は, HI-001と同じ

この定理の拡張類型を探るのは、困難であり、一時中断する。

見つけるは、来年になるだろう。

蛭子井博孝

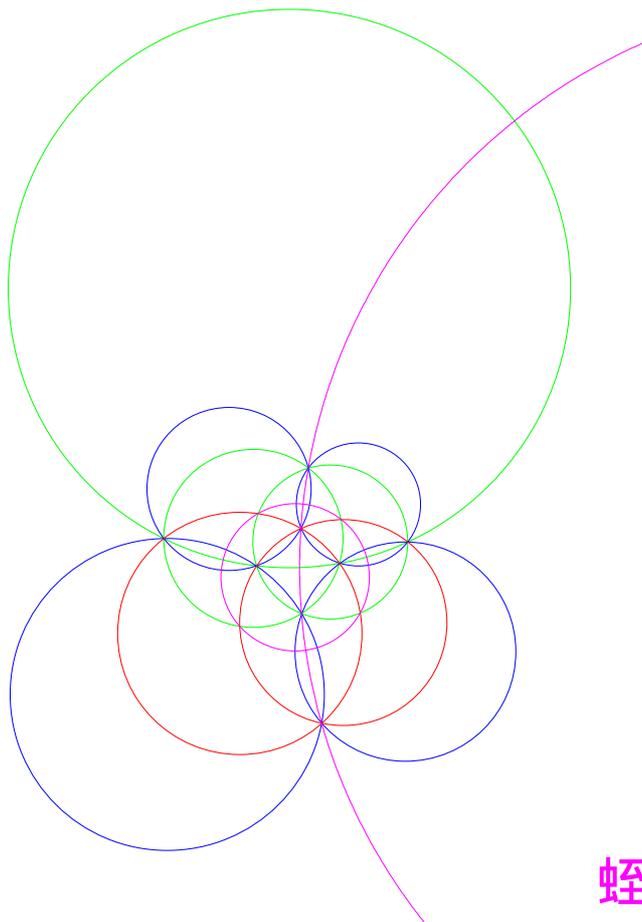
HI-197



2008-2-19

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2009-2-7

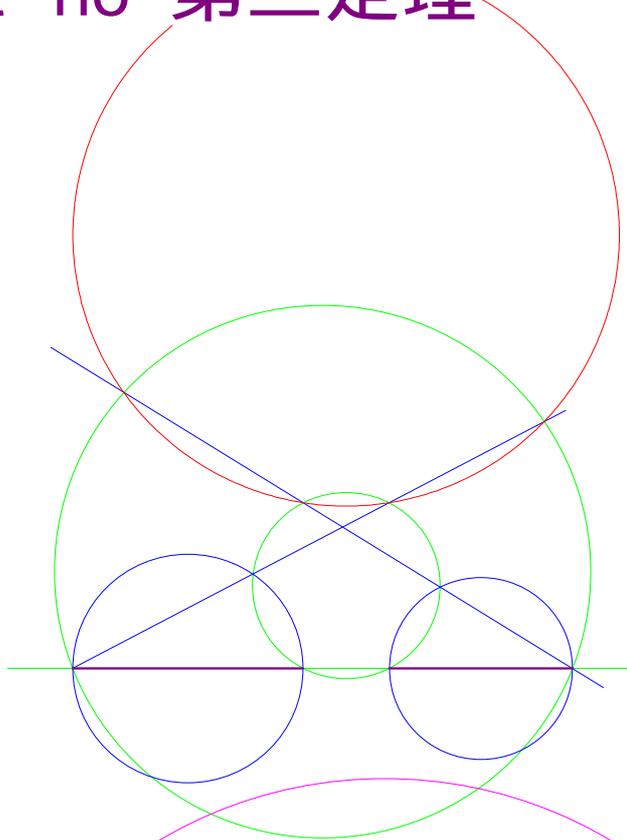


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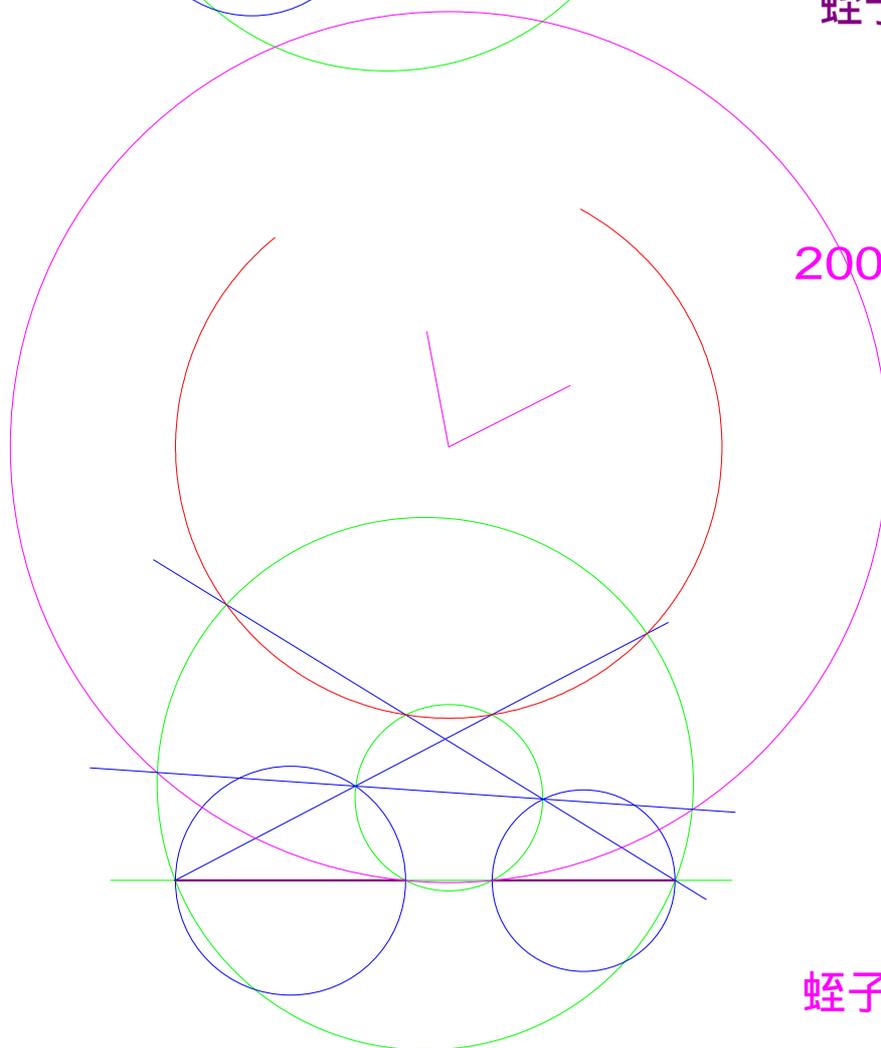
# donut no 第二定理

HI-198

2008-2-19



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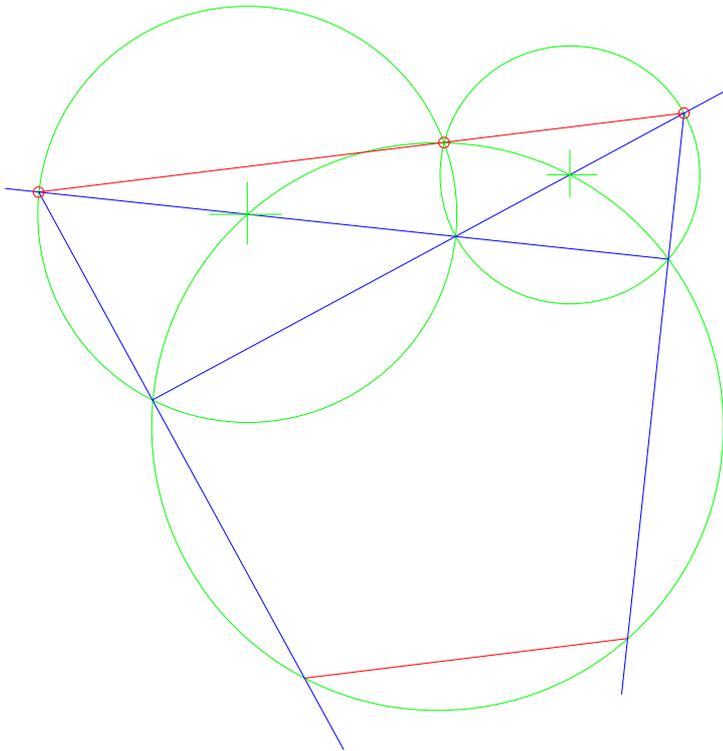
2009-2-7

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HI-199

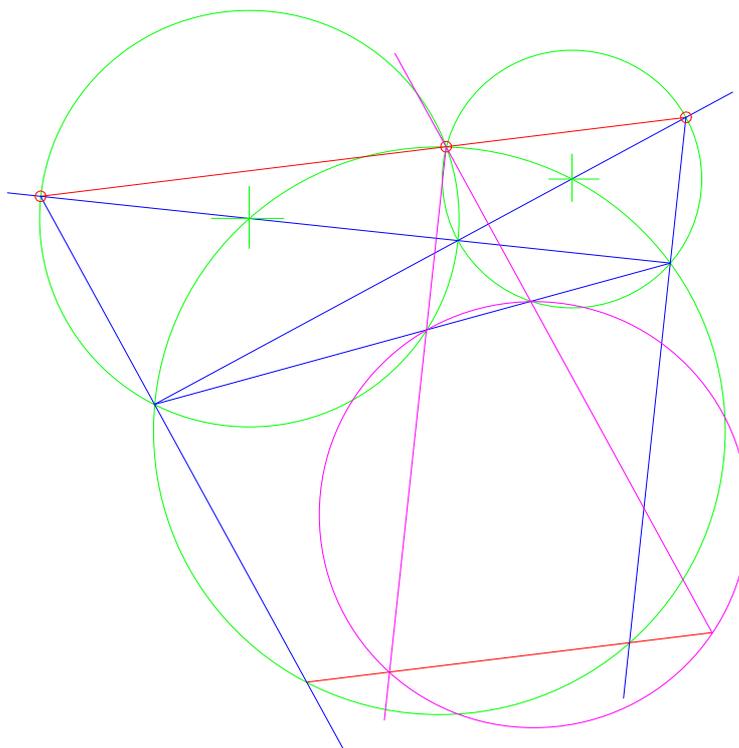
# 共線と平行

2008-2-20



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2009-2-7

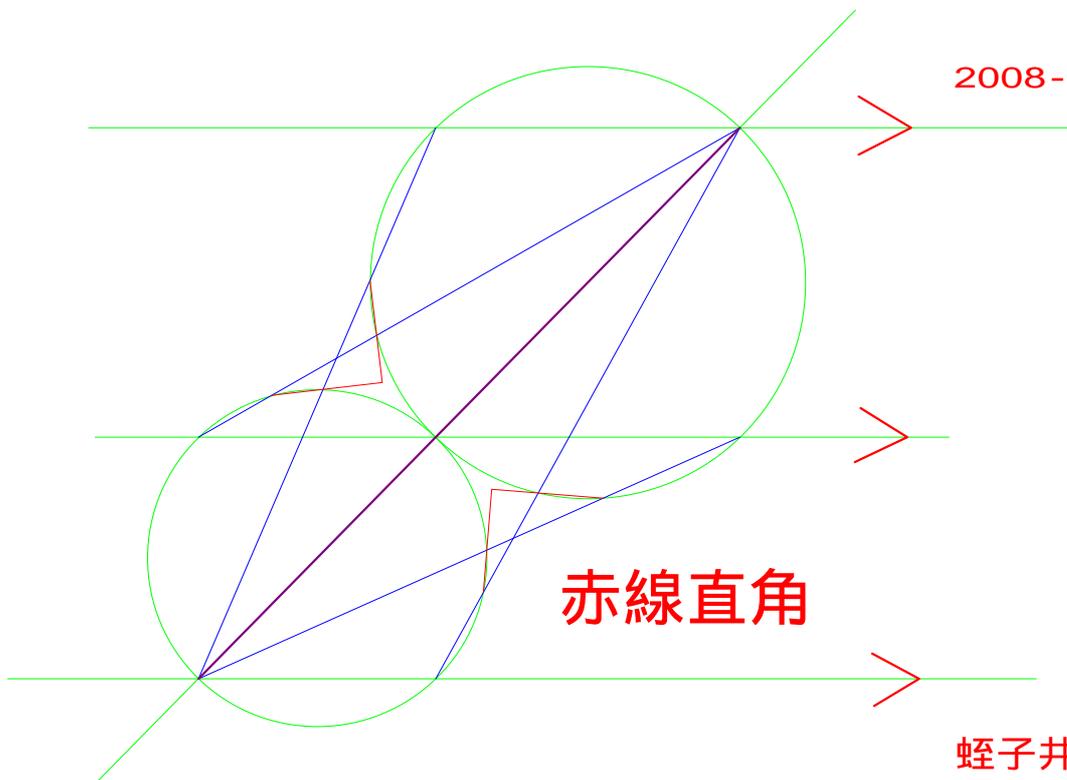


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# ひょうたんの定理

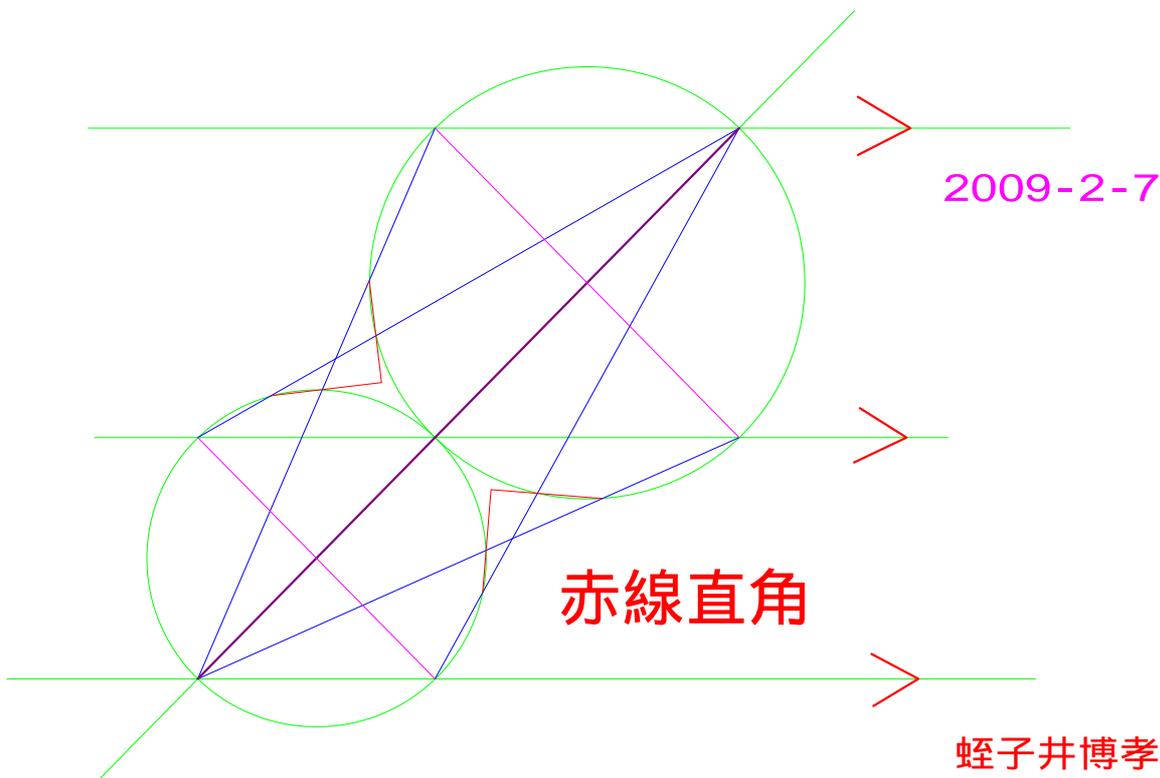
HI-200

2008-2-2 1



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2009-2-7



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あとがき

これで、200+200 の 400 題の定理集ができあがった。

前回の点線円幾何学から、今回の これも、点線円幾何学ができあがるまでは、わずかな日だった。ありがたいことに、だんだんと、新しい結論線を入れるのが、早くできるようになってきた。次回の、それも、点線円幾何学も、もうすぐ作る予定である。

さらに、五部作まで、500+500 題を作って、今年は終わりにしようと思う。

点線円幾何学の基本定理は、何か、今研究中である。

共点、平行線、二等辺三角形、垂直、共円が結論の場合がほとんどであるが、

中には、長方形、平行四辺形、正三角形なども、結論にしたものがある。

条件線、初期補助線、補助線、結論線、追加結論線のうち何を使って、今までの作品を分類すべきか、まだ結論が出ていない。

とにかく、1000 題を分類しないと、雑題集になる。

点線円幾何学とは、何か。その中に、根軸、直径、中心の位置が、問題になっているものもある。まだまだ、これからの幾何学であるが、HI-101 から HI-200 までを、ここにあげている。ご賞味いただきたい。（蛭子井博孝記）

これも、点線円幾何学

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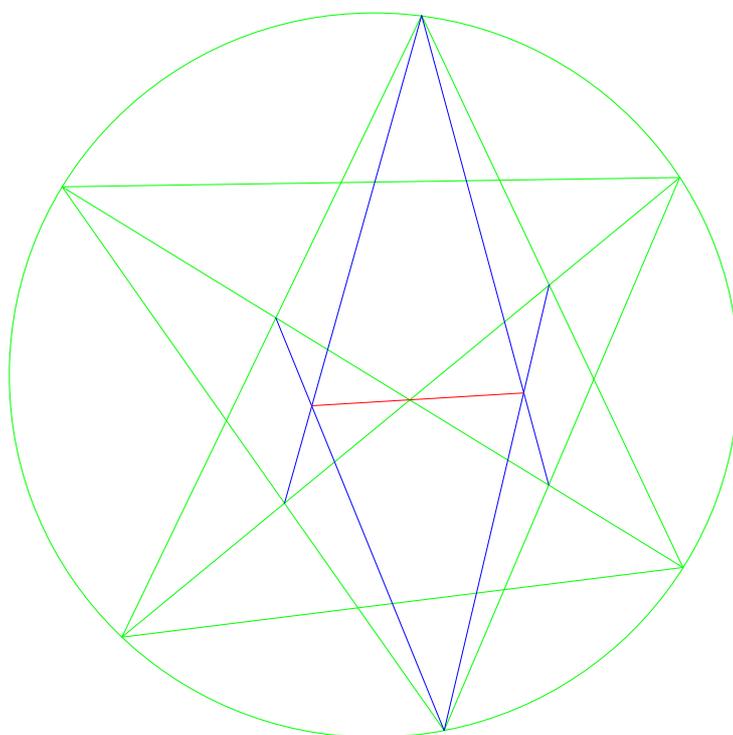
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ありがとう



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