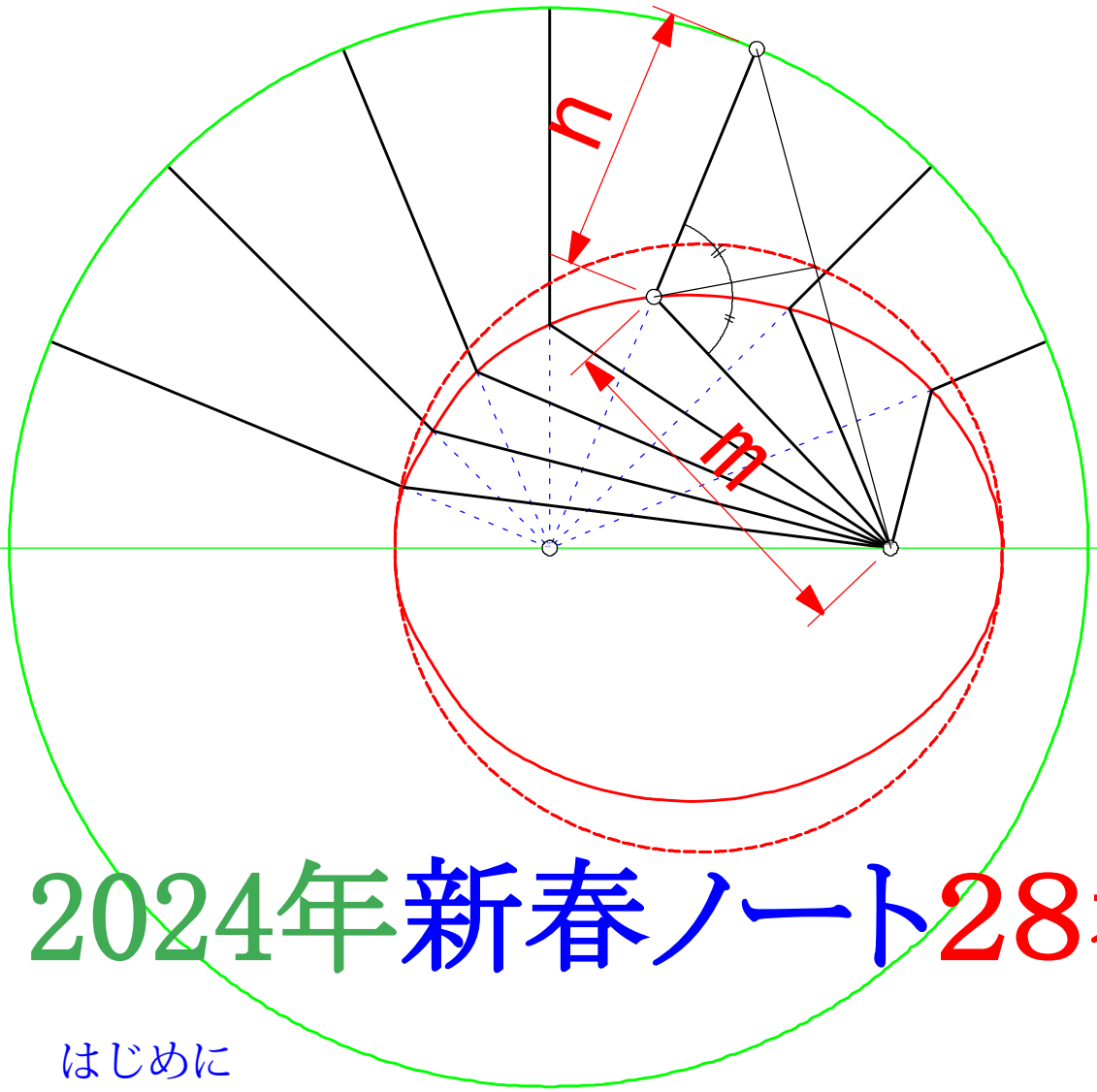
Tajicoid 3

とは、点と円との距離の比がm：nの曲線

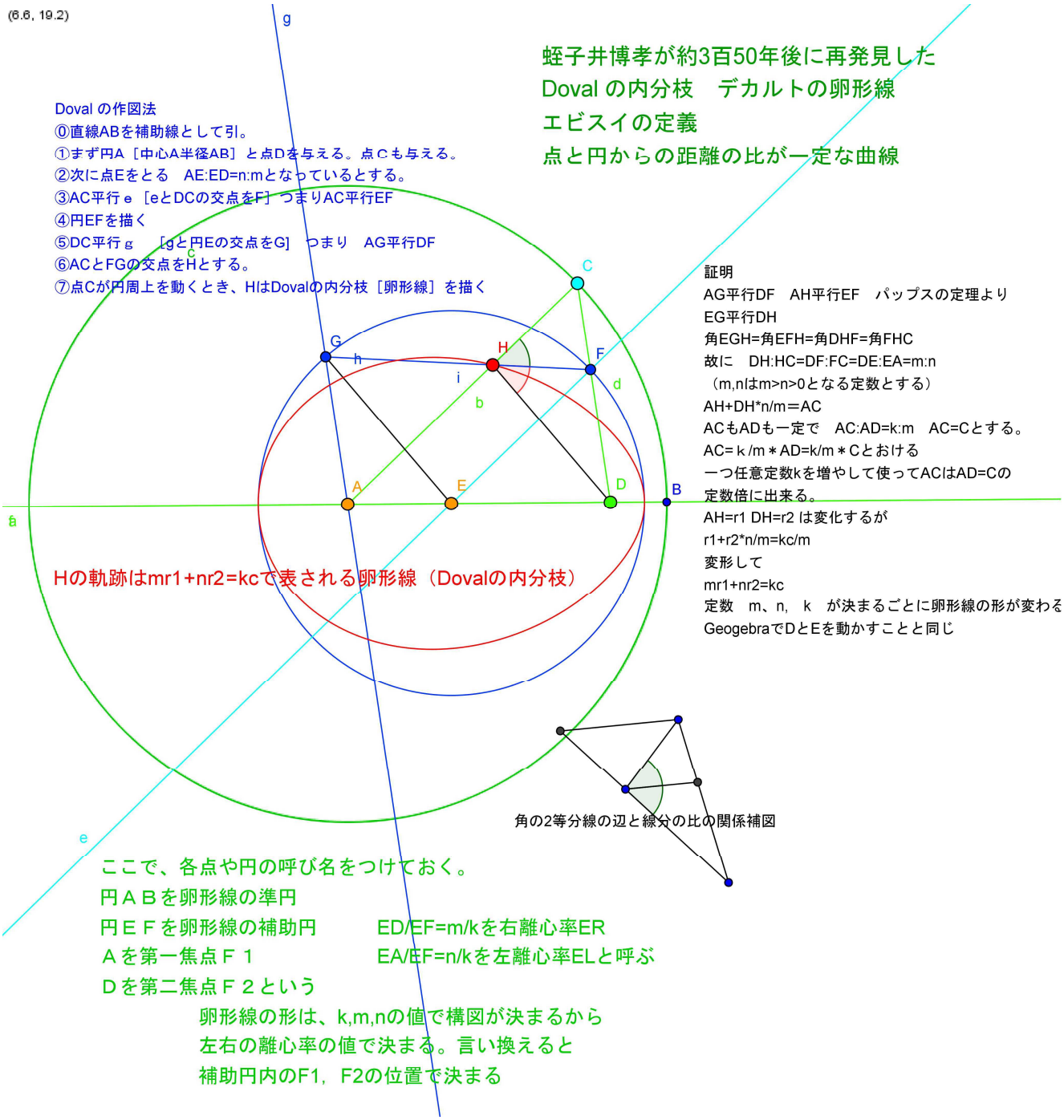


2024年新春ノート28考

はじめに
世の中で、何が大切か, 空間か, 時間か, 内容か、動きか、人々か, 考える対象か、部分か、全体か、とにかく、物事は変わってゆく。しかし、時にとどまり、時に眠り、時に、新しい目覚めが待っている。憩い 考える時、PC幾何学の情熱は安らぎに変わる 。

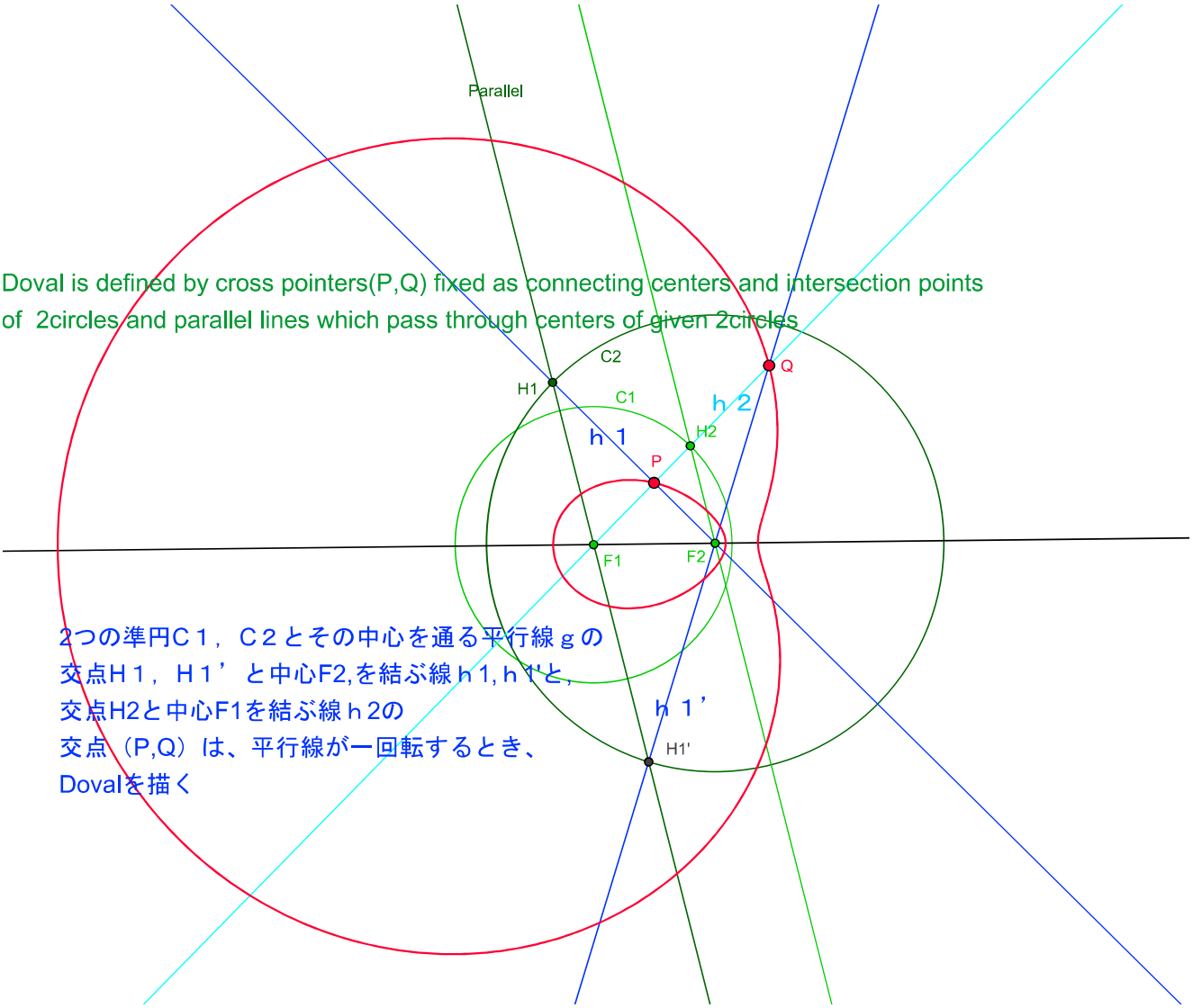
Dovalの双極座標表示式

蛭子井博孝 740-0012 岩国市元町4丁目12-10　1950-04-20生まれ　0827-22-3305



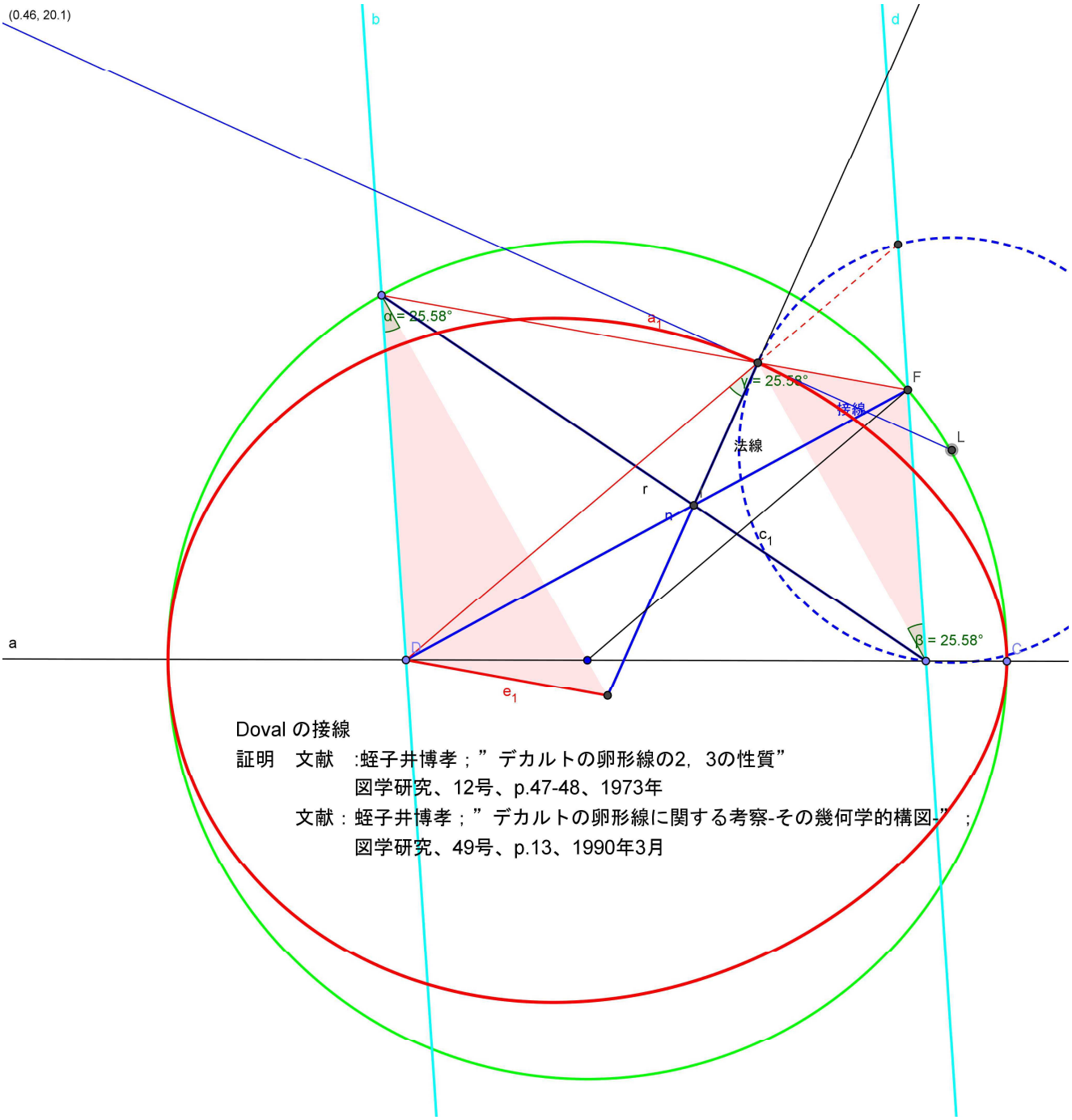
Doval DEF 2 with WORDS

蛭子井博孝　岩国市元町4丁目12-10 - 縮尺（cm単位）: 1:1



Doval Tangent Proof 2

蛭子井博孝 - 2014-12-28



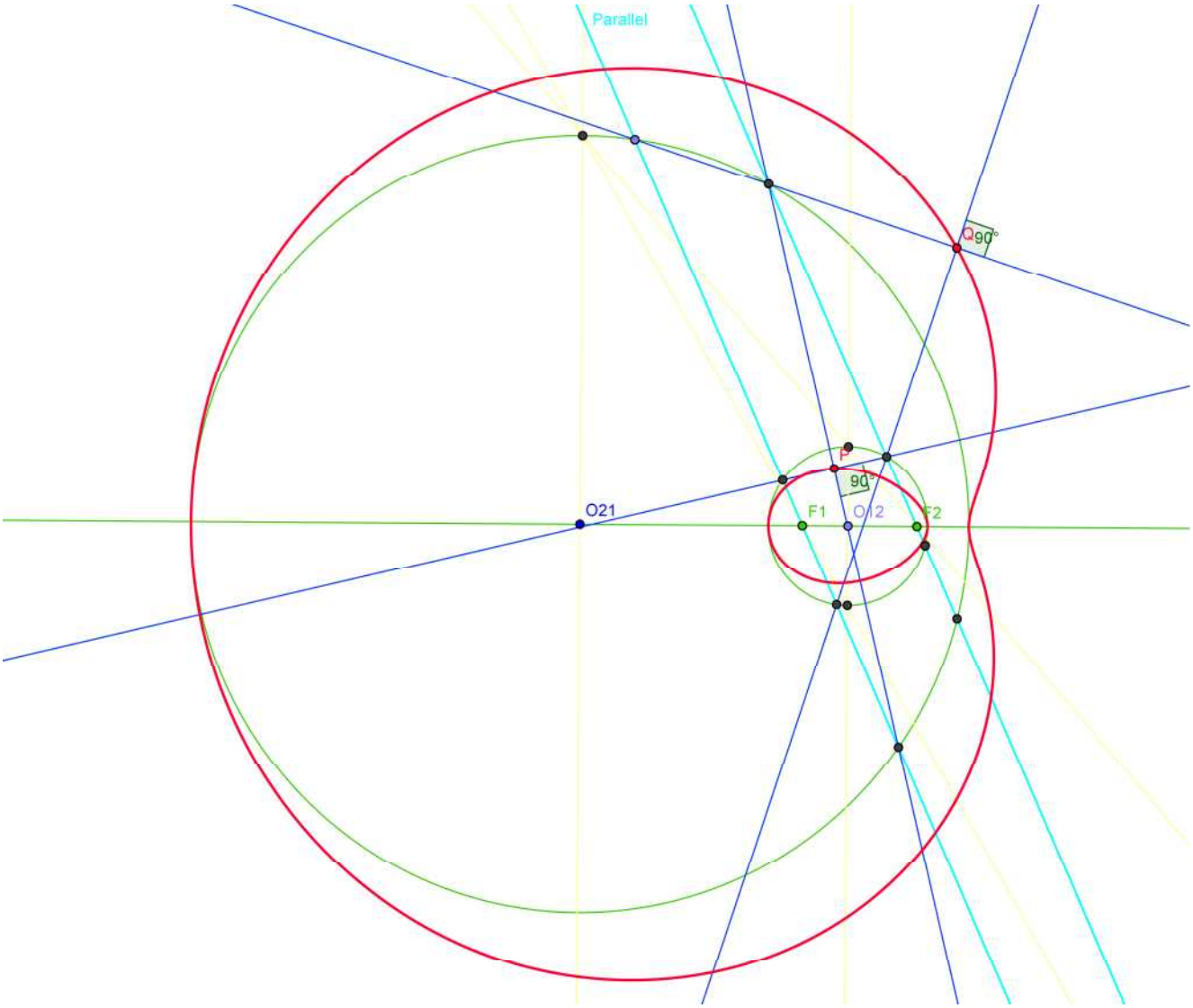
Doval の接線

証明　文献　:蛭子井博孝；”デカルトの卵形線の2，3の性質”
図学研究、12号、p.47-48、1973年

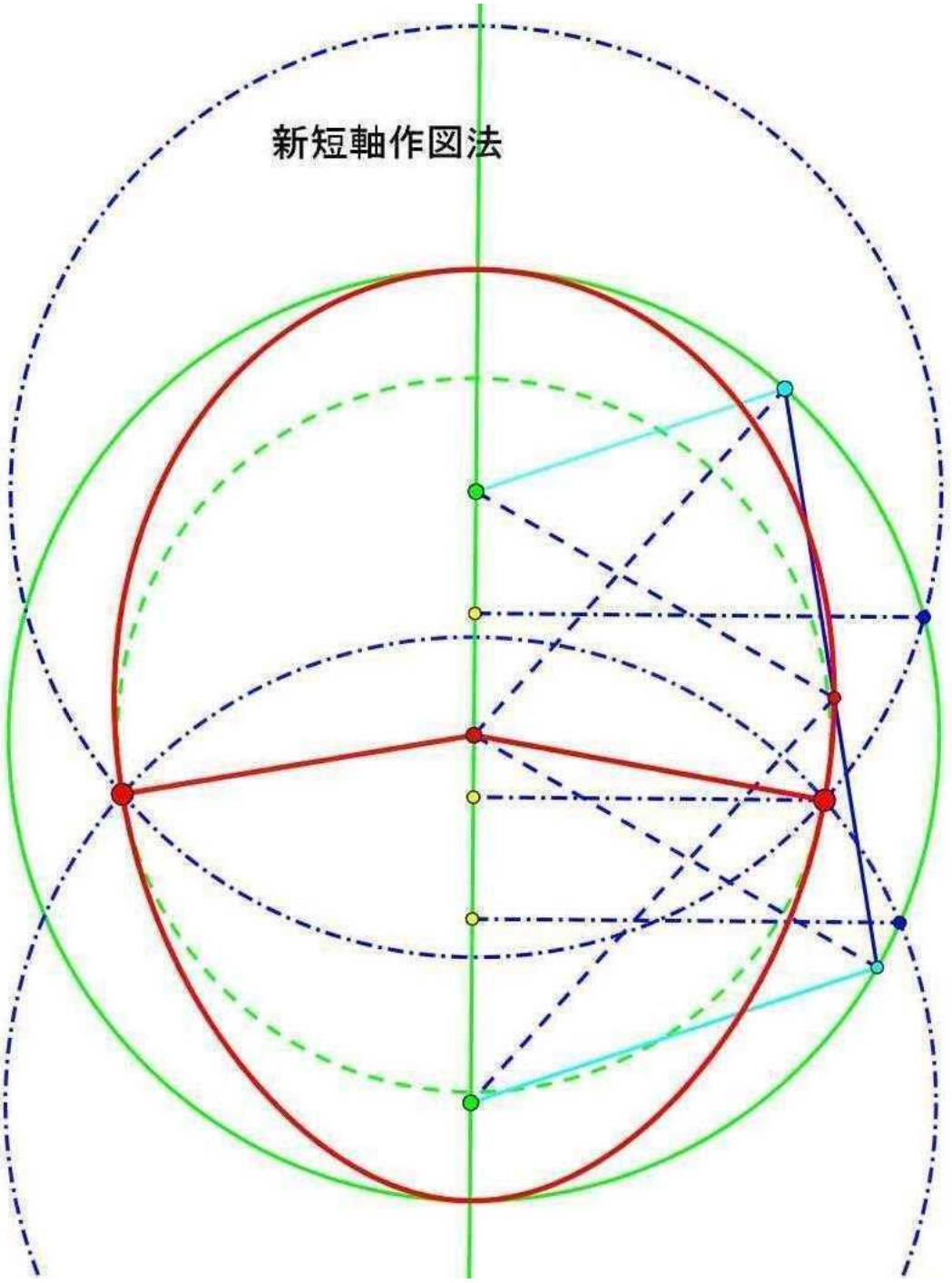
文献：蛭子井博孝；”デカルトの卵形線に関する考察-その幾何学的構図-”；
図学研究、49号、p.13、1990年3月

Doval (Inner Outer Parts 2) Defined by 2 Auxiliary circle(green)s

蛭子井博孝　岩国市元町4丁目12-10 - 縮尺（cm単位）: 1:1

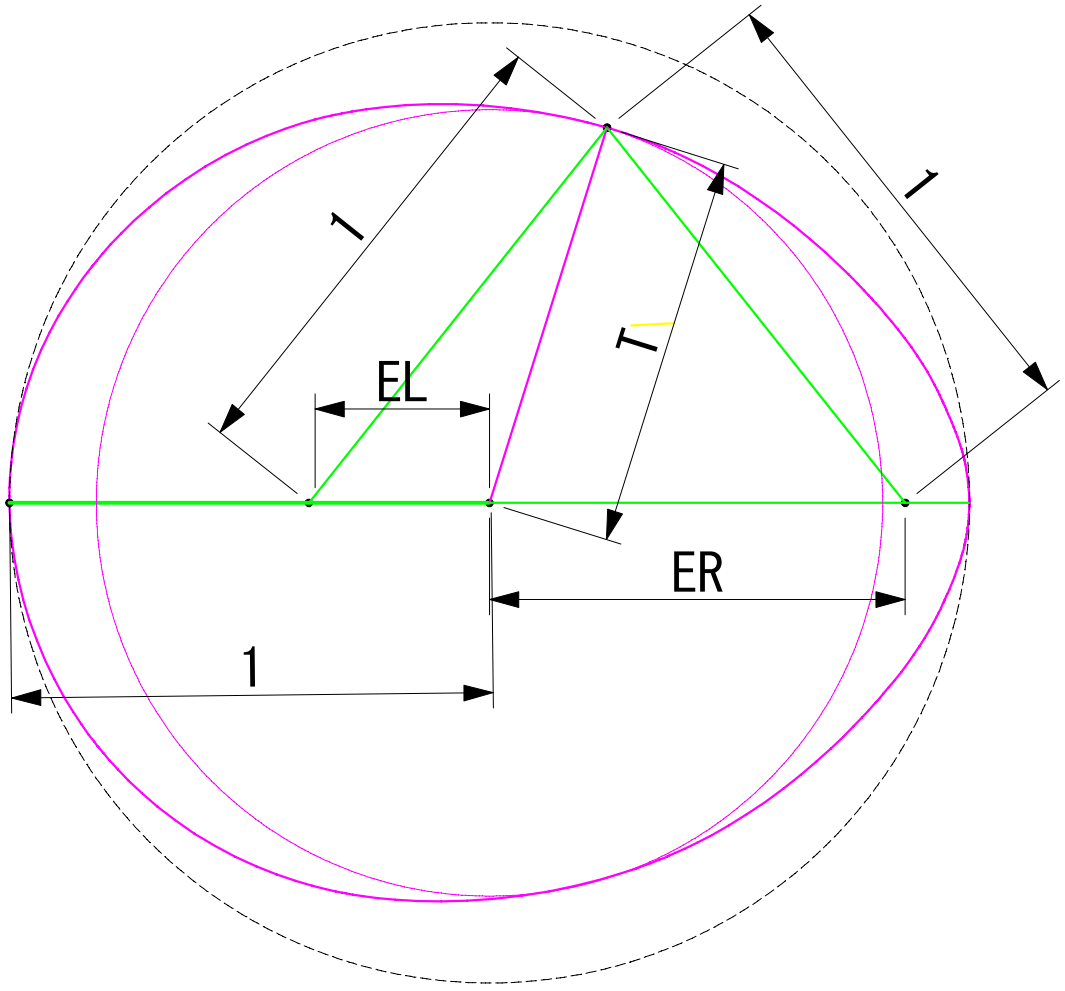


蛭子井博孝　2020-11-7



2007年7月吉日

短軸の長さ $T=\sqrt{1-E_L E_R}$

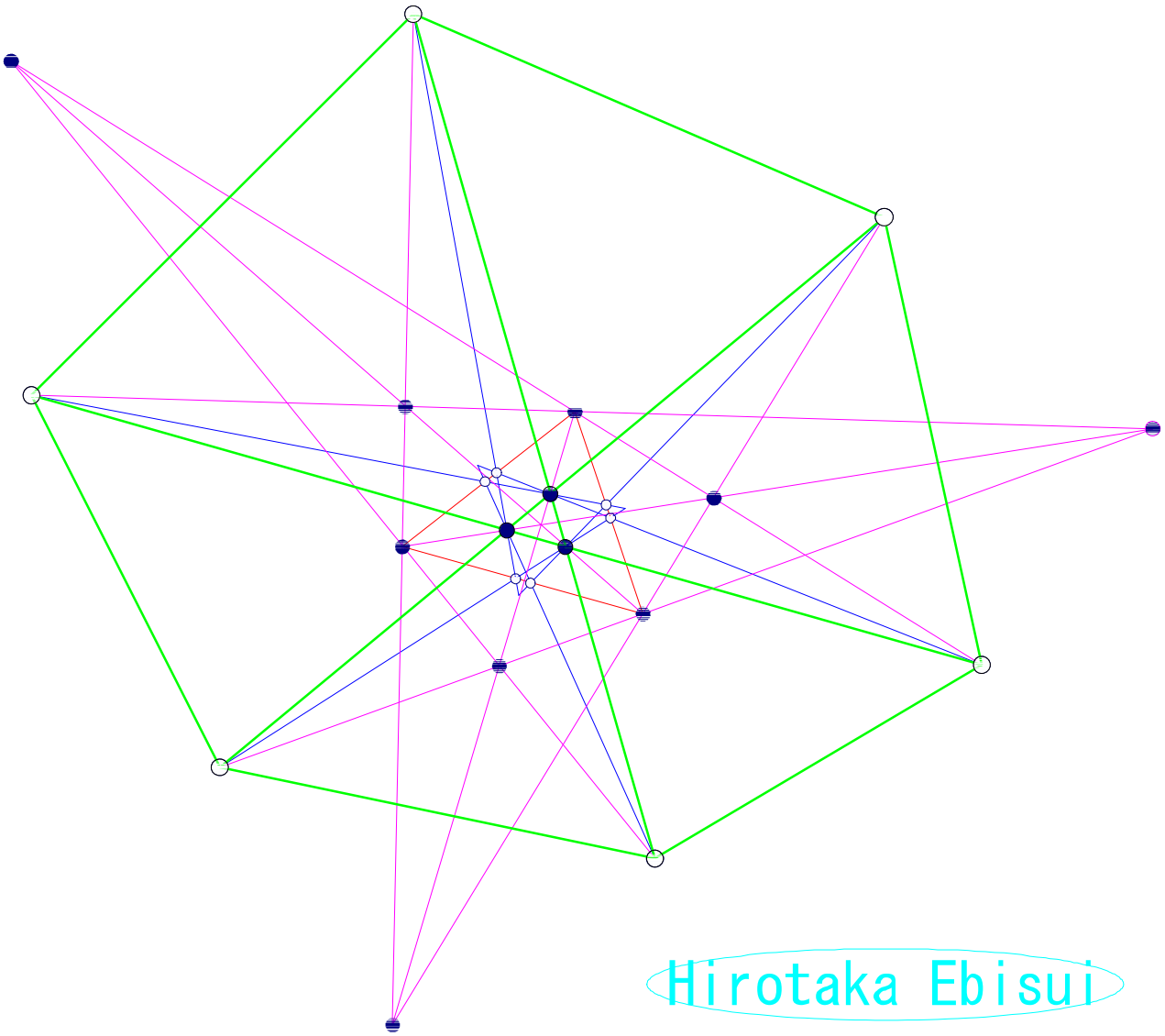


蛭子井博孝著

Collinear NOTE no.9

HEXAGON THEOREM

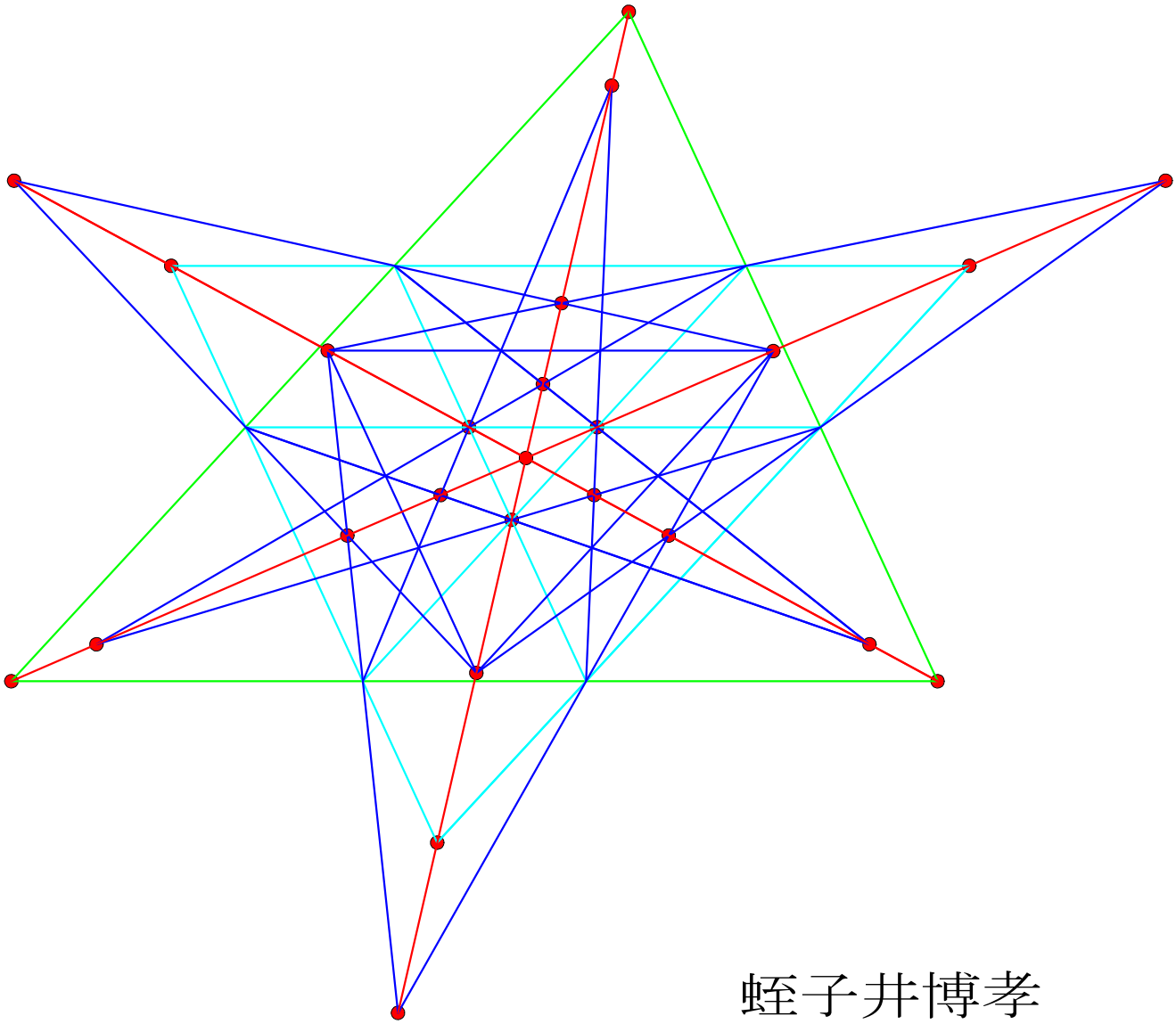
6 Points given freely



Hirotaka Ebisui

三角形辺6本平行線9点共線3本組ヘキサゴン定理

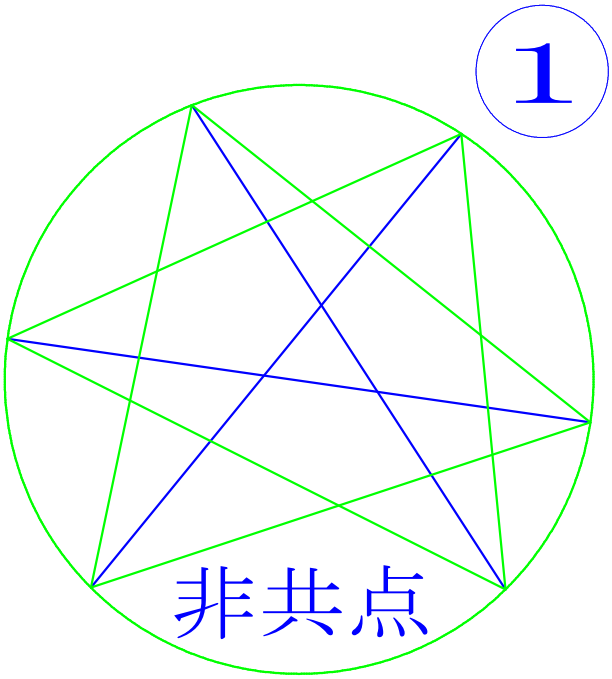
2023－12－24再描清書

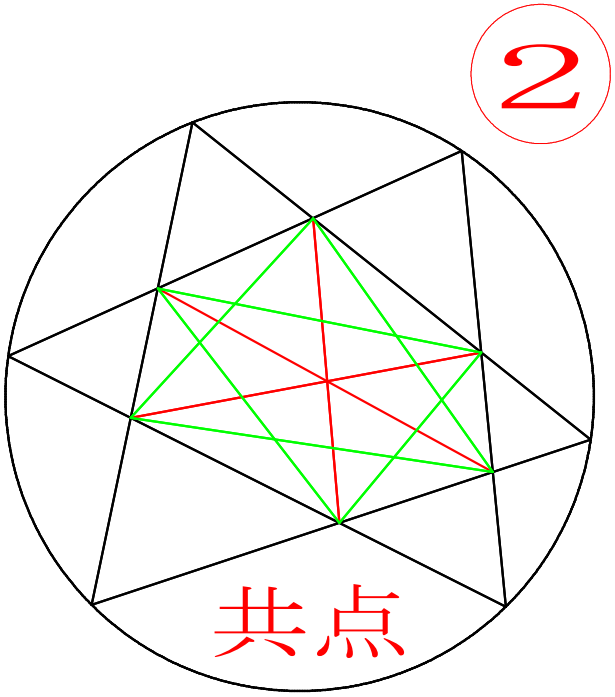


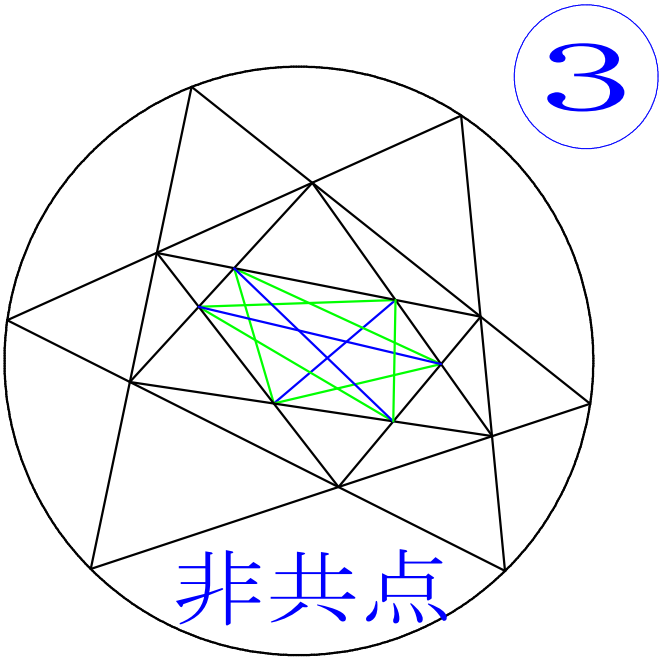
蛭子井博孝

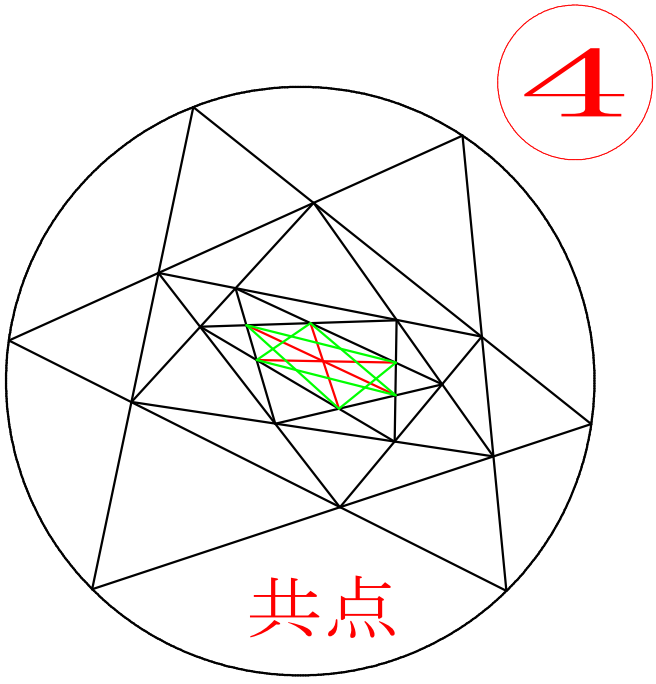
星々内部交互性

HEXSTAR-0002



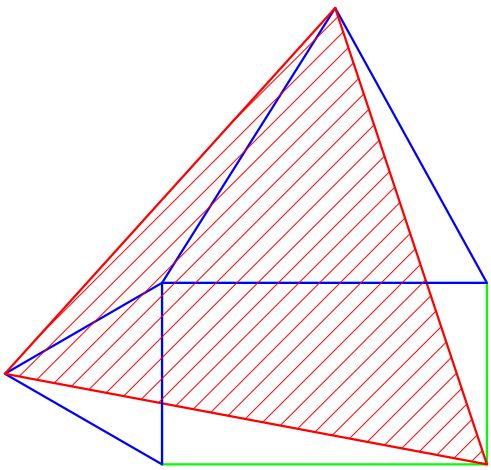




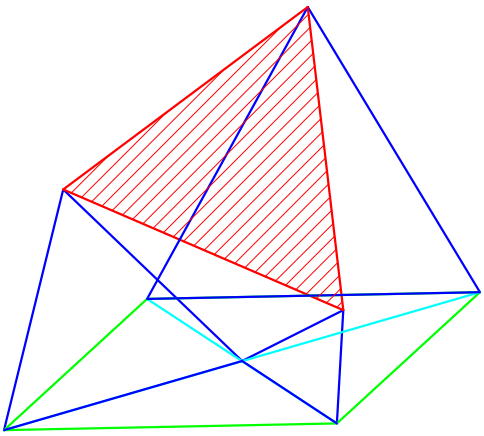


星々内部非共点・共点交互性

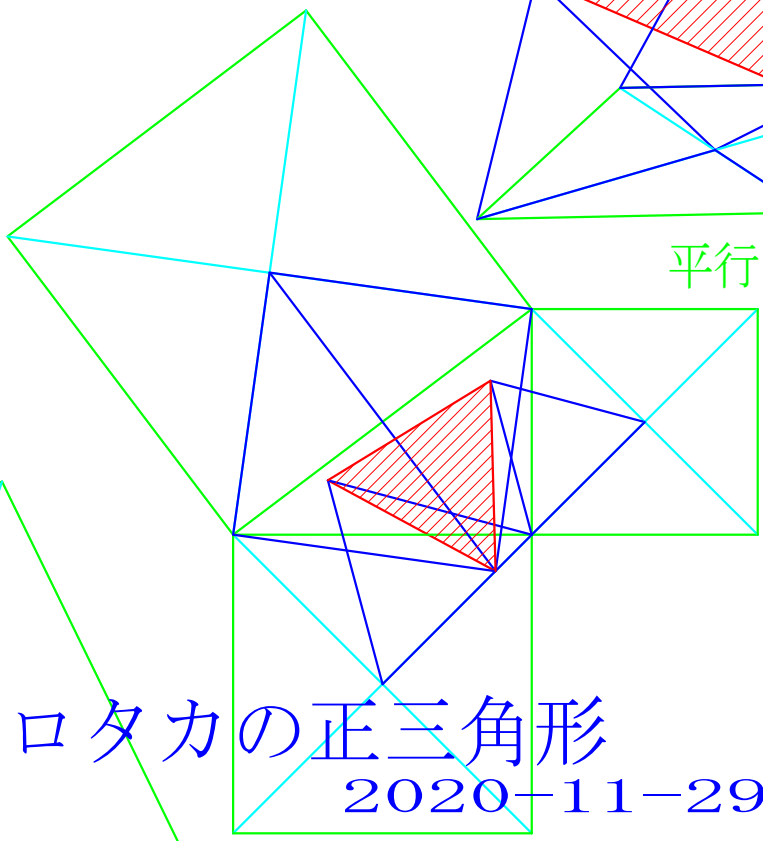
正三角形 要粋



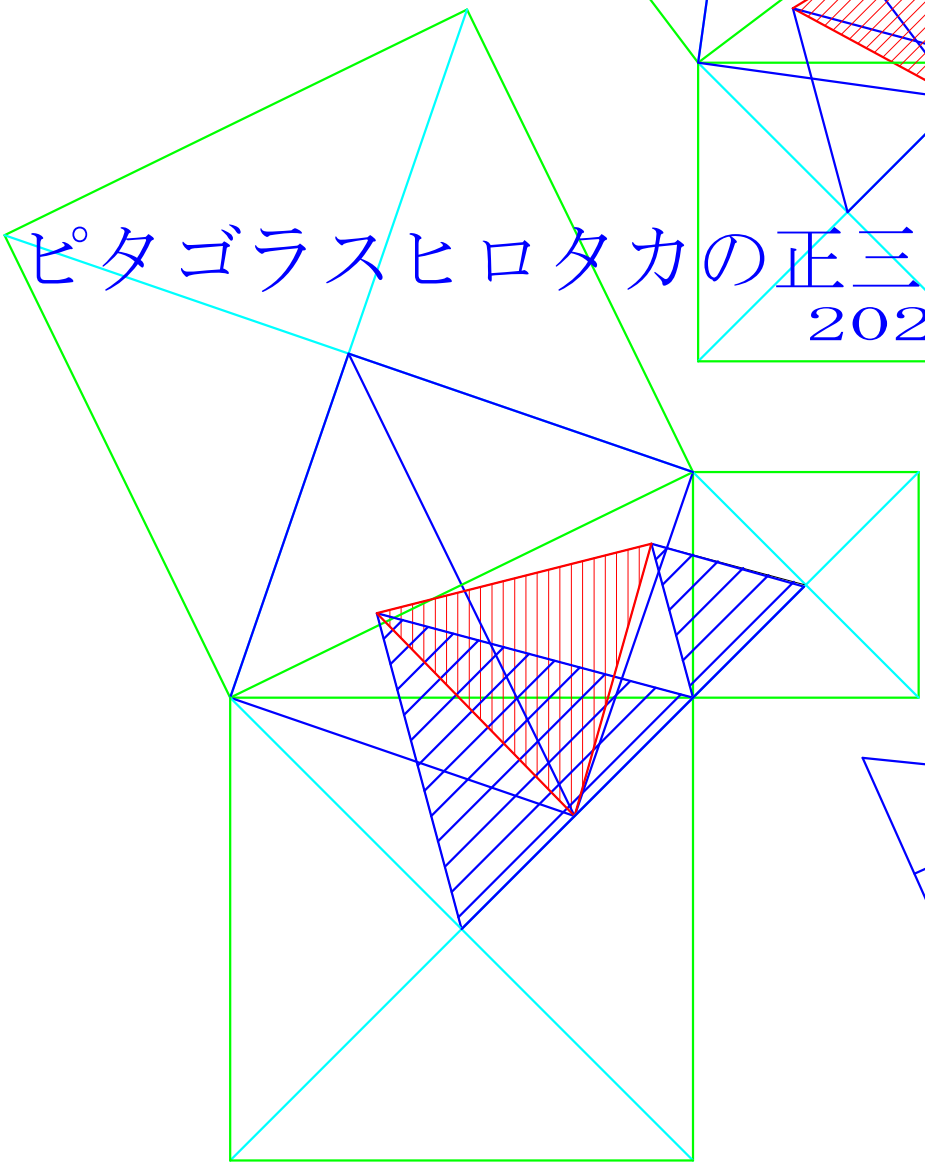
長方形



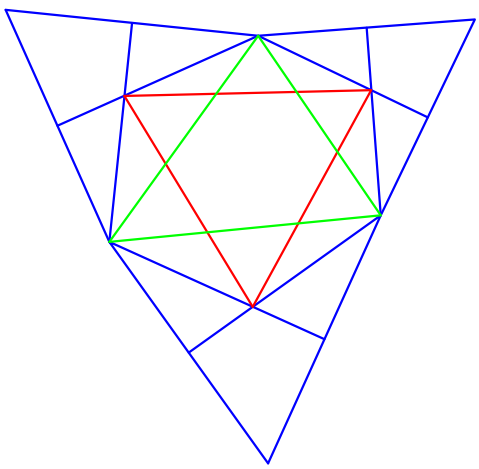
平行四辺形



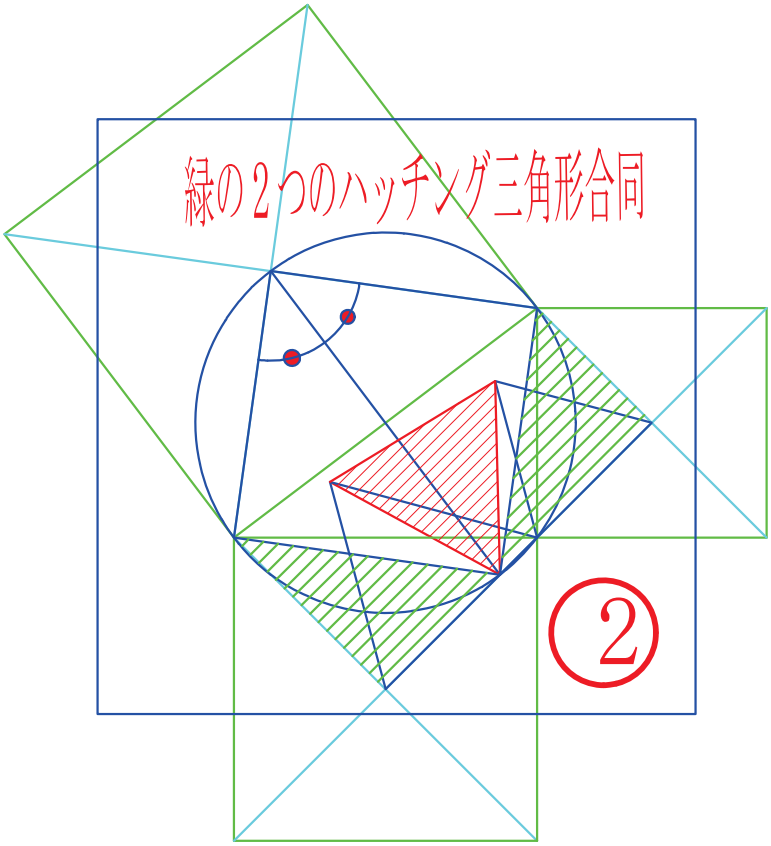
ピタゴラスヒロタカの正三角形
2020−11−29

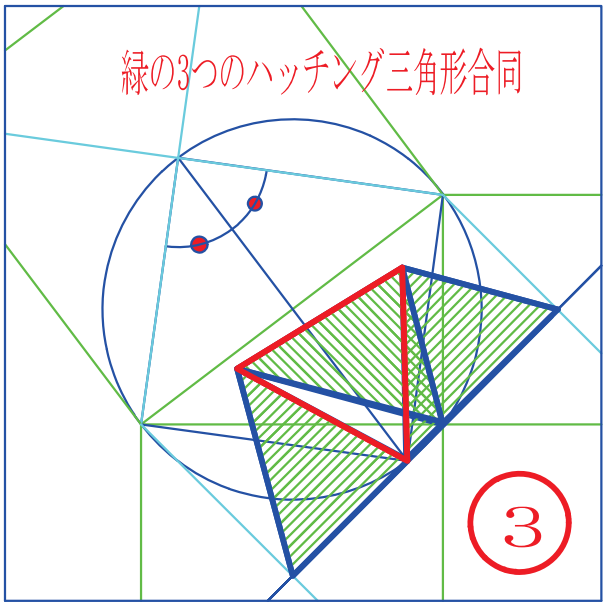


ナポレオンの正三角形

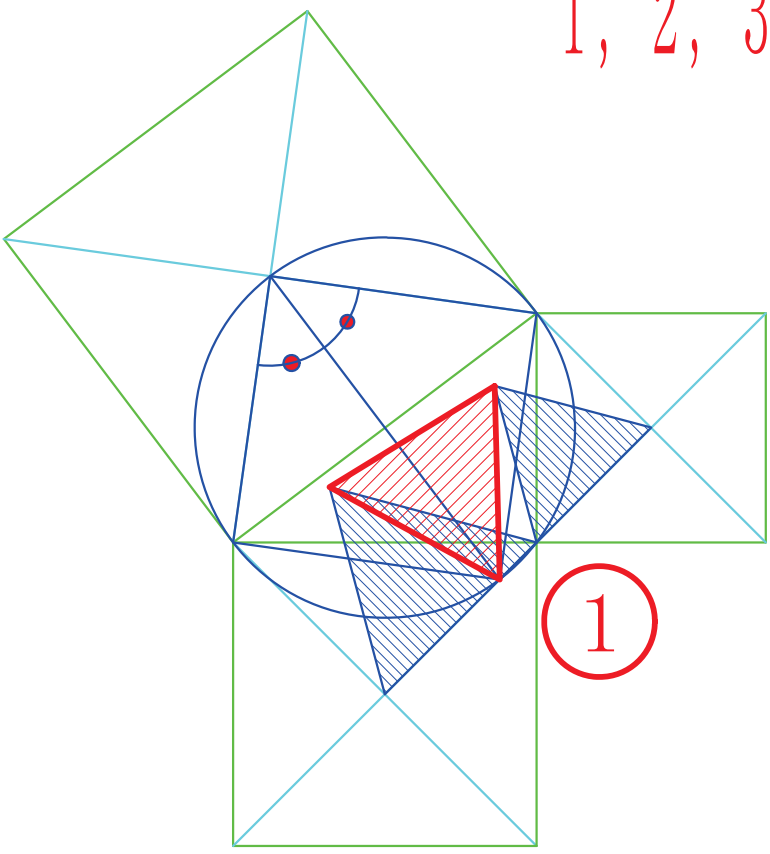


蛭子井博孝ピタゴラスの正三角形

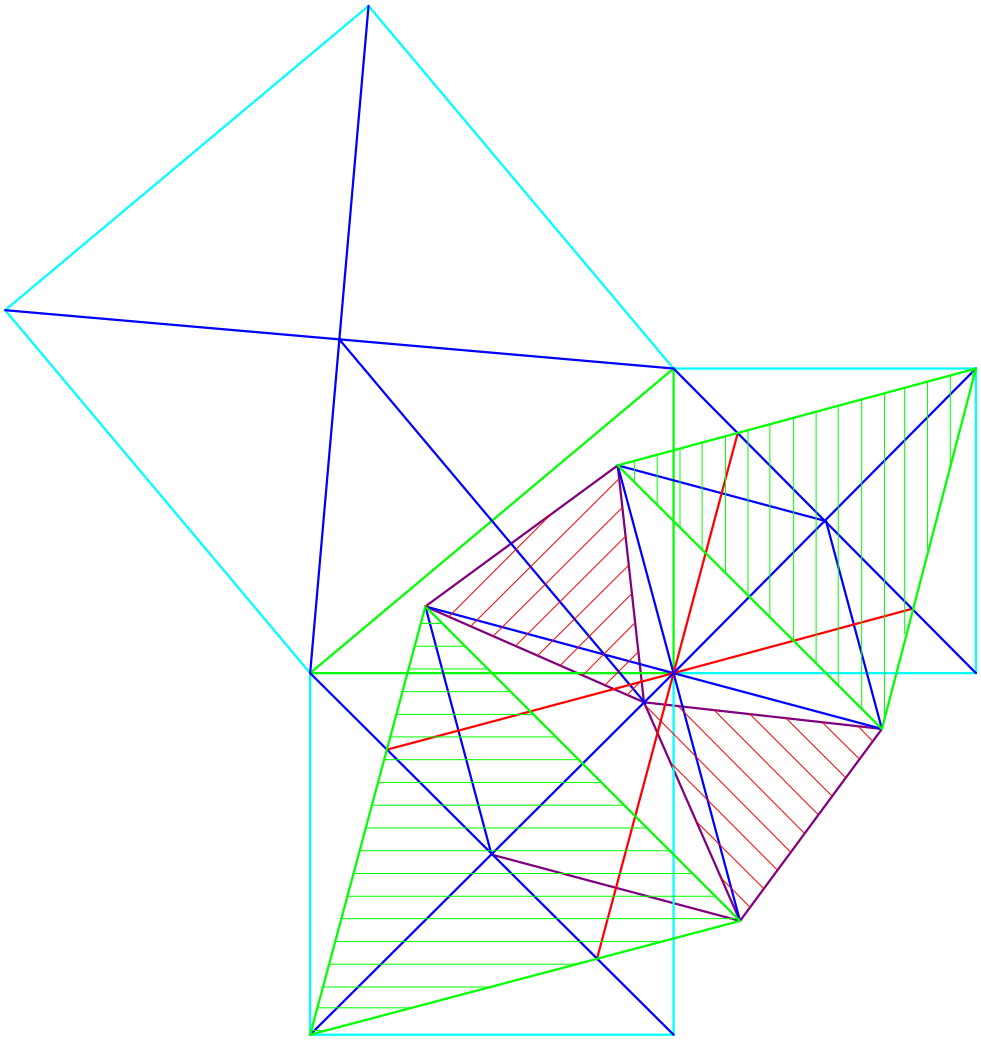




1，2，3より赤は正三角形

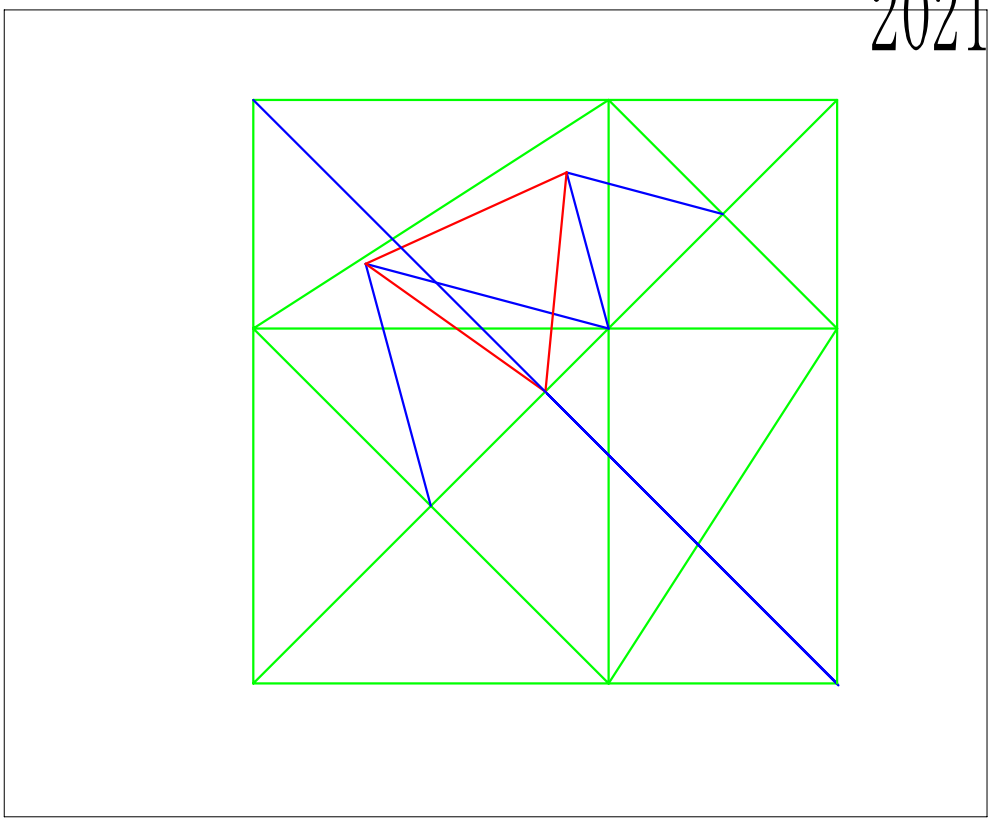


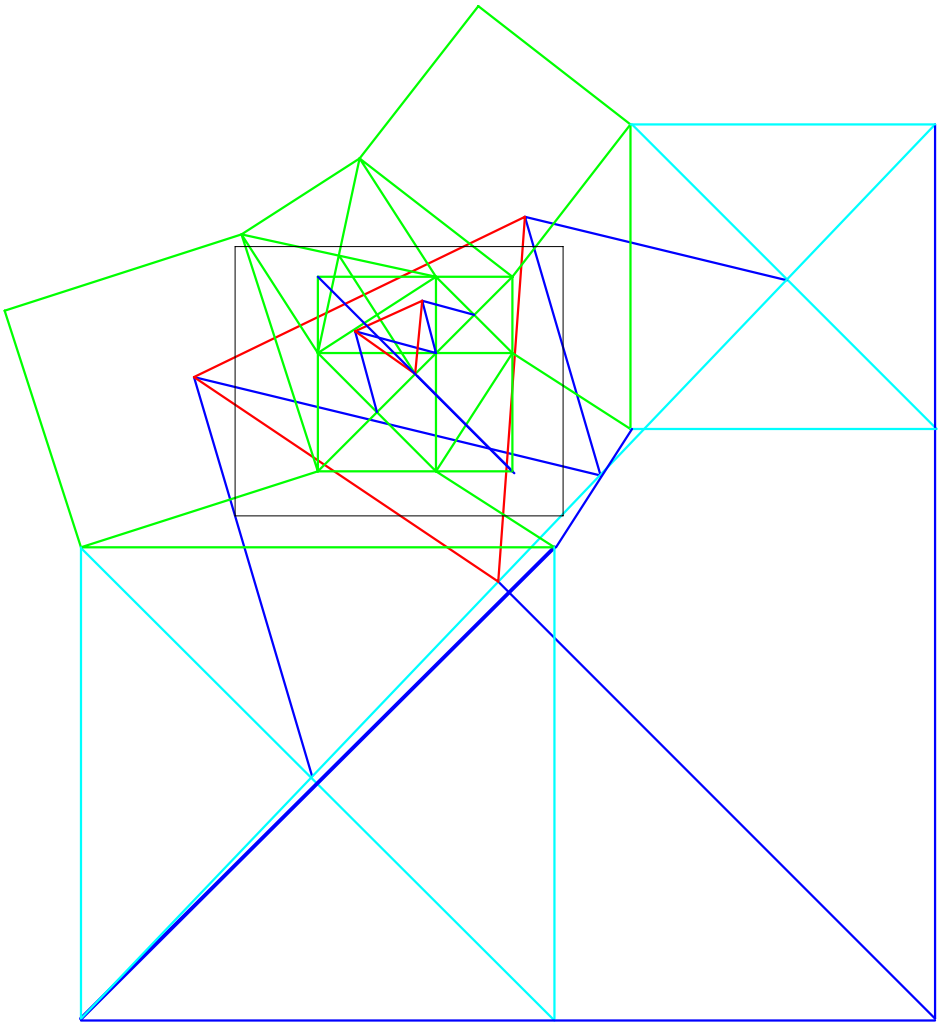
蛭子井博孝ピタゴラスの正三角形定理



蛭子井博孝ピタゴラス正三角形無限連鎖(2)段」

2021-4-27

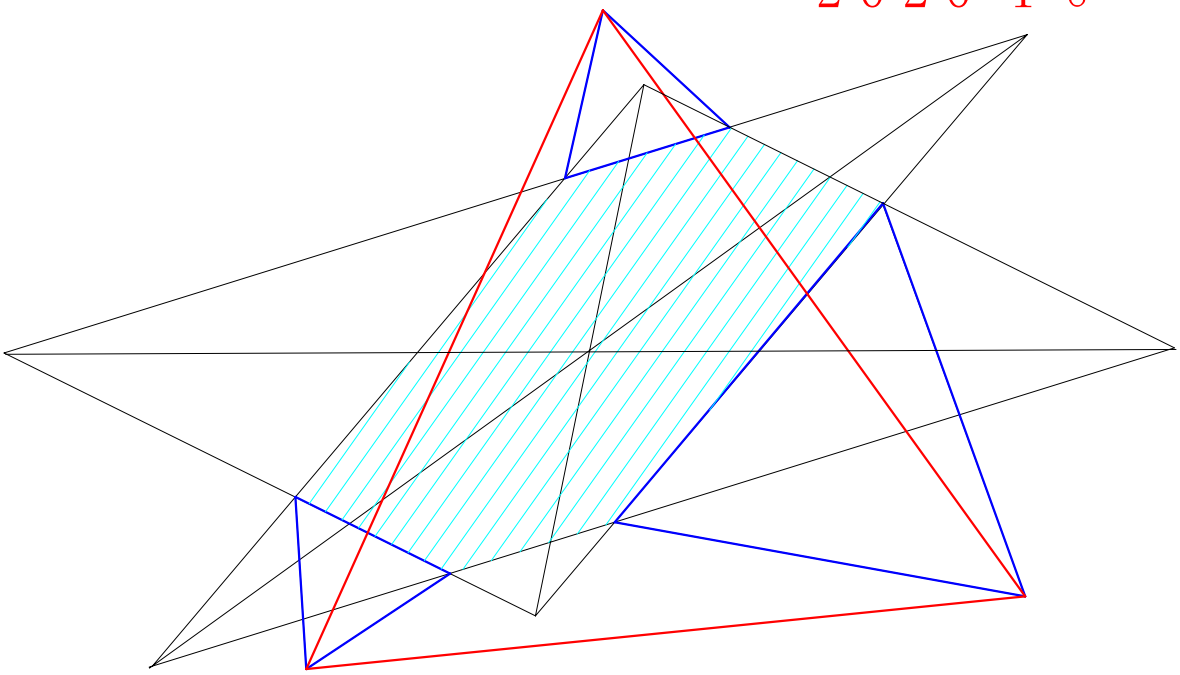




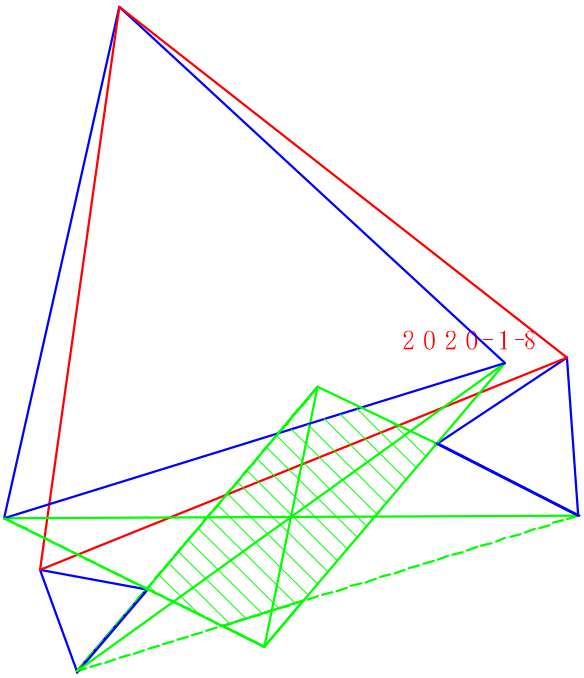
蛭子井博孝

三角形重なり辺の正三角形による正三角形の定理

２０２０-１-８



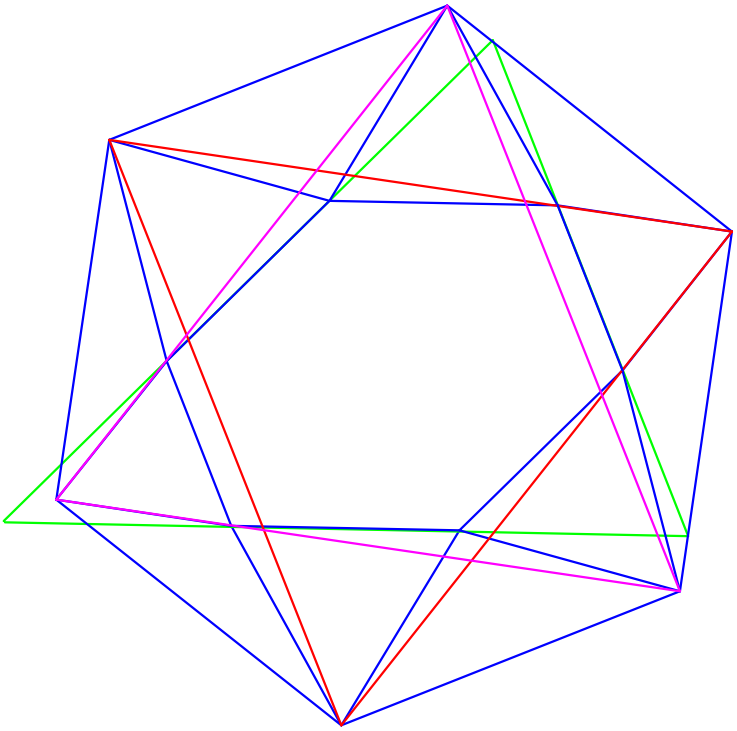
蛭子井博孝



蛭子井博孝

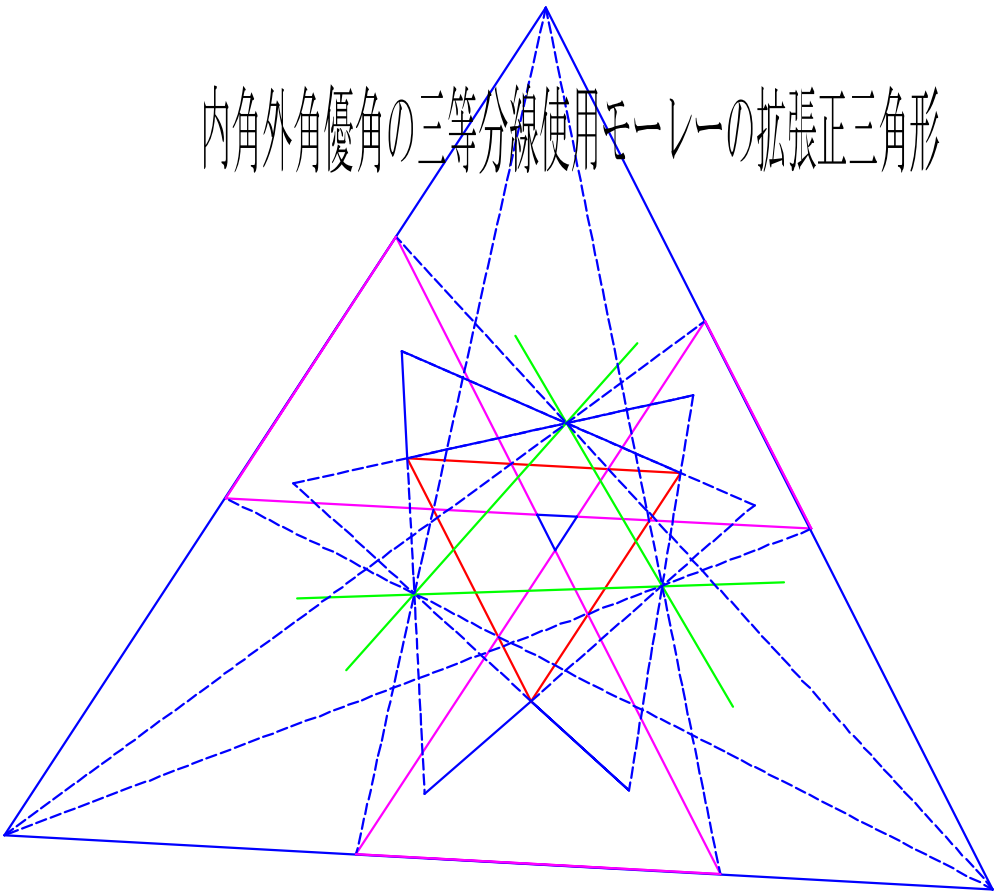
2重三角形の定理

辺の三等分線使用ナポレオンの拡張正三角形



2021−4−5

内角外角優角の三等分線使用モーレーの拡張正三角形

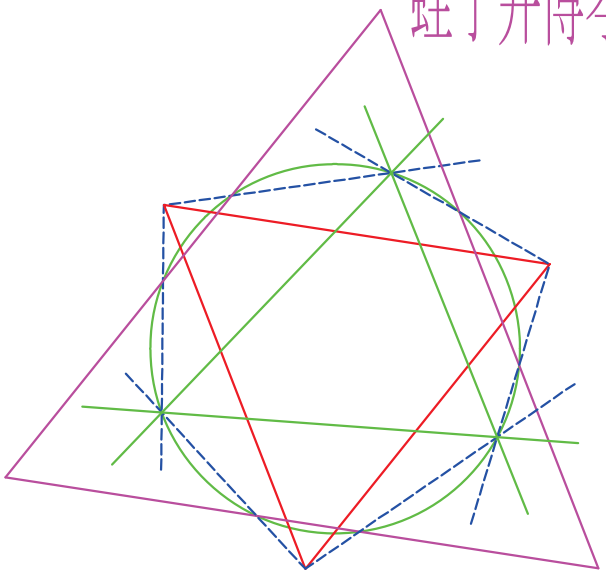


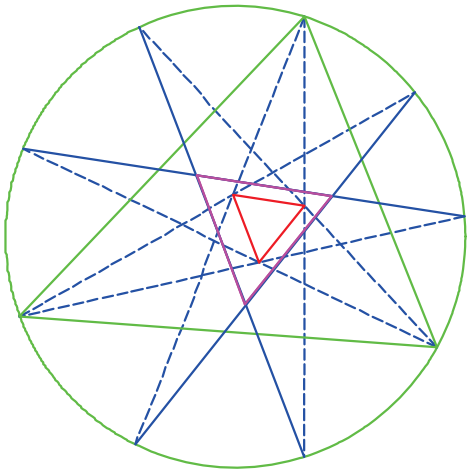
蛭子井博孝

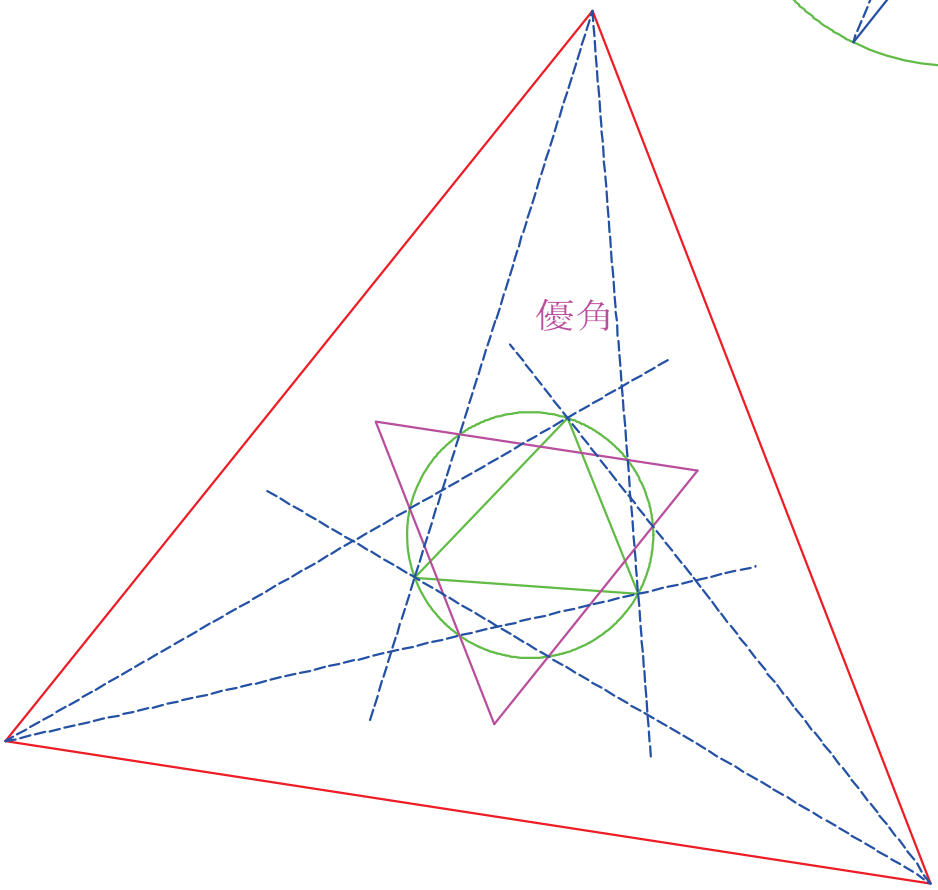
頂角の内外優角の3等分線と外接円の交点による

2022−2−20

蛭子井博孝モーレーの正三角形



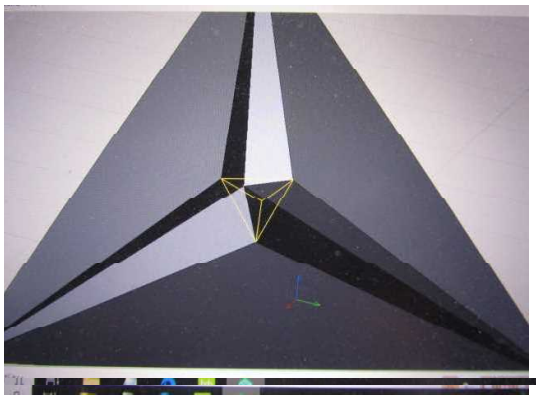


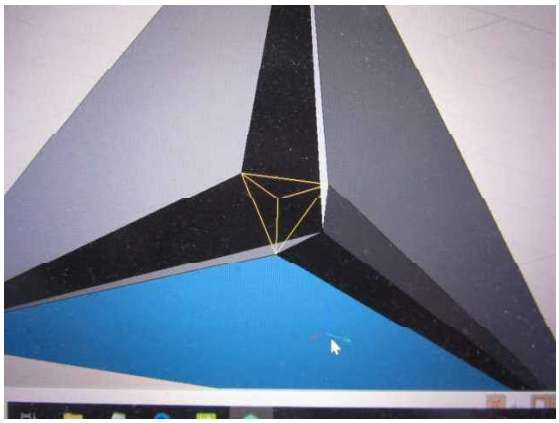


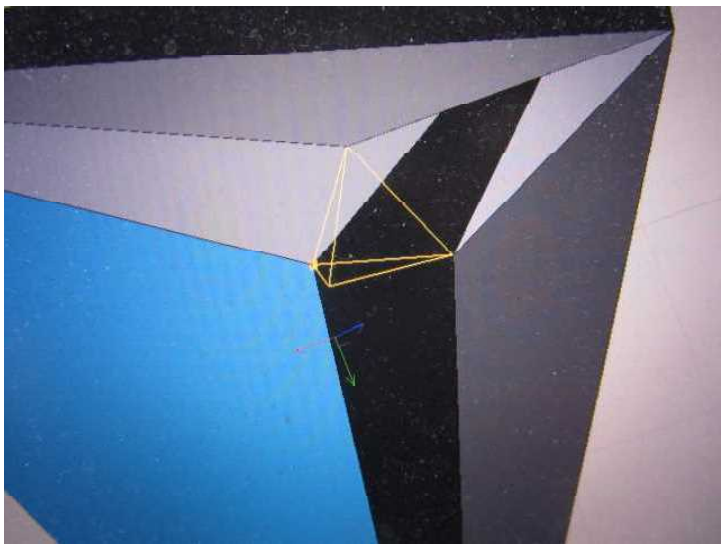
蛭子井博孝

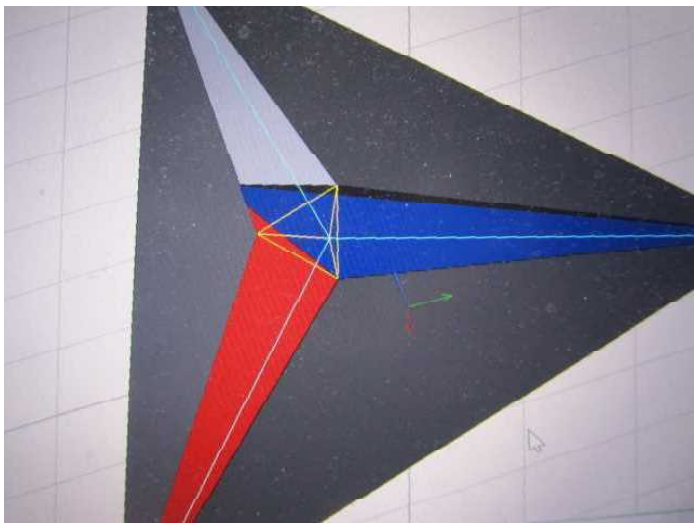
モーレーの 3D化正四面体定理

一般の四面体の 6稜線の面角 3等分面を作り、 1つの面に近い面の 3辺を通る三等分面の交点ををそれぞれ、四面体の 4面に作るとその 4点は正四面体になる。







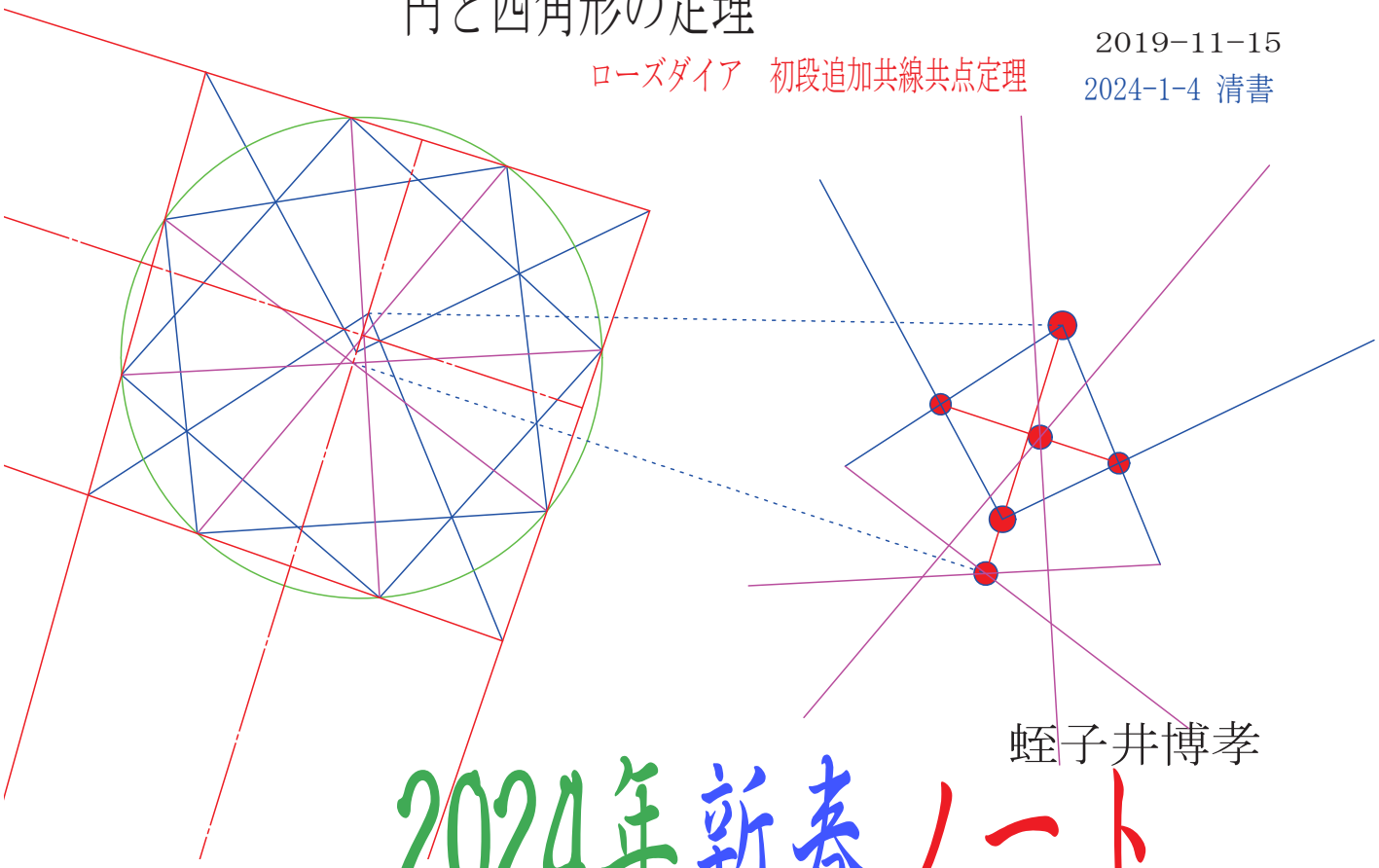


円と四角形の定理

2019−11−15

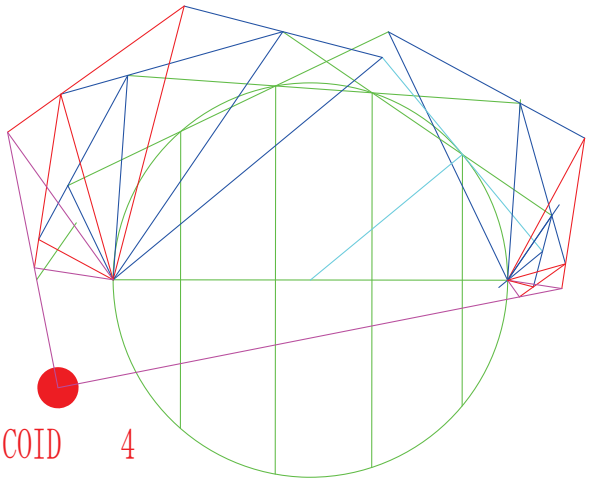
ローズダイア　初段追加共線共点定理

2024-1-4 清書

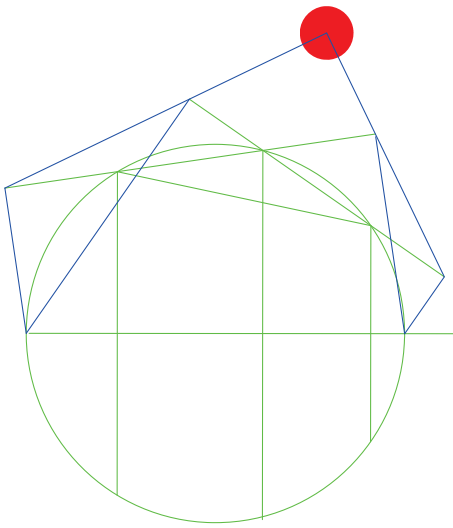


蛭子井博孝

2024年新春ノート

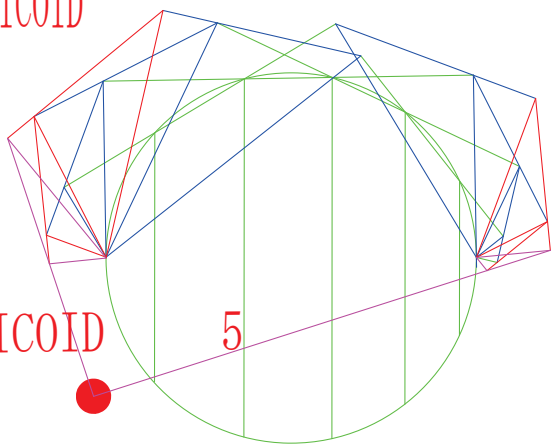


TAJICOID　3



TAJICOID　4

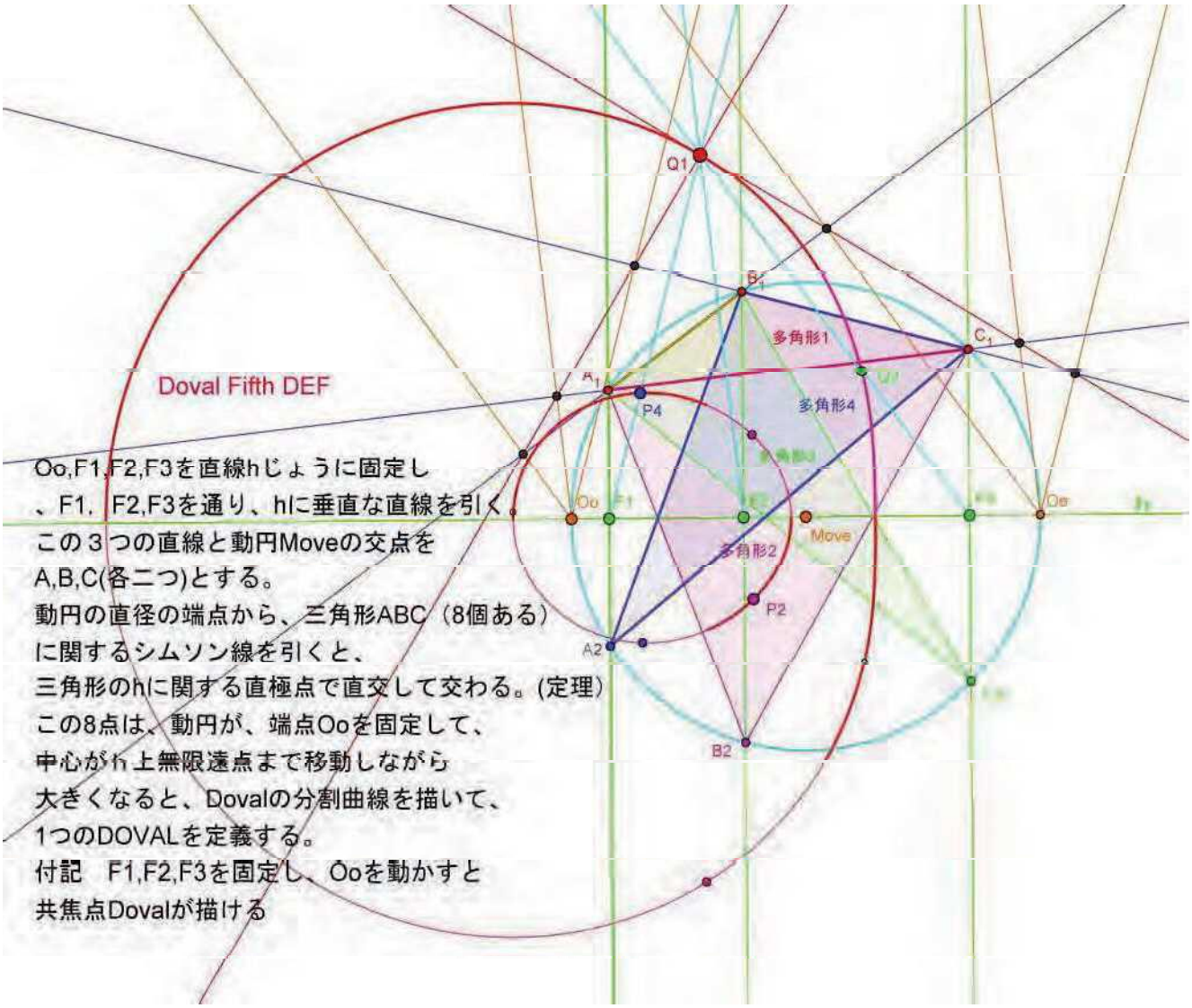
定義補助図TAICOID



TAICOID　5

DOVAL　第五定義

蛭子井博孝　740-0012　岩国市元町4丁目12-10　0827-22-3305 - 縮尺（cm単位）: 1:1



```
> # TAJICOID RESEARCH PG by H.E 2023-8-19 RV:
> with(StringTools):
```

`?` (1)

```
>print( ) : print(蛭子井博孝, [2, 10000], LEVEL NUMBER, 10, ch, 3 , 4, 5, 6, 7,
      FormatTime("%Y-%m-%d-(%r)") ) : Hs := { } :for hj from 1 to 21 do LC||hj := 0 :od:
      sc := 0 :for h from 2 to 10000 do  if h = 4  then print(h[Lv(無限大)]) : print( ) fi: if
      not  isprime(h) then n := h  : hs := {h} :for le from 1 to 20 do fs := 0 : ft := n : fp := 2 :
      nc := 0 : Hx := n :for p from 1 to n/2 do if ft mod fp = 0 then nc := nc + 1 : ft := ft/fp : FT
      ||le||nc := fp :fnc||le := nc : fs := fs + fp  else fp := nextprime(fp) fi:od: LN||le :=
      Hx[seq(FT||le||k, k = 1 .. fnc||le)[sm = fs]] : hs := hs union {fs} :if not isprime(fs)
      then n := fs  else LC||le := LC||le + 1 :if LC||le ≤ 1 and le ≤ 10 then   Hs := Hs
      union{hs} fi : break if:od fi  :od: print(Hs) :
```

? (2)

```
蛭子井博孝, [2, 10000], LEVEL NUMBER, 10, ch, 3, 4, 5, 6, 7, "2023-12-15-(03:57:26 AM)"
```

$4_{Lv(無限大)}$

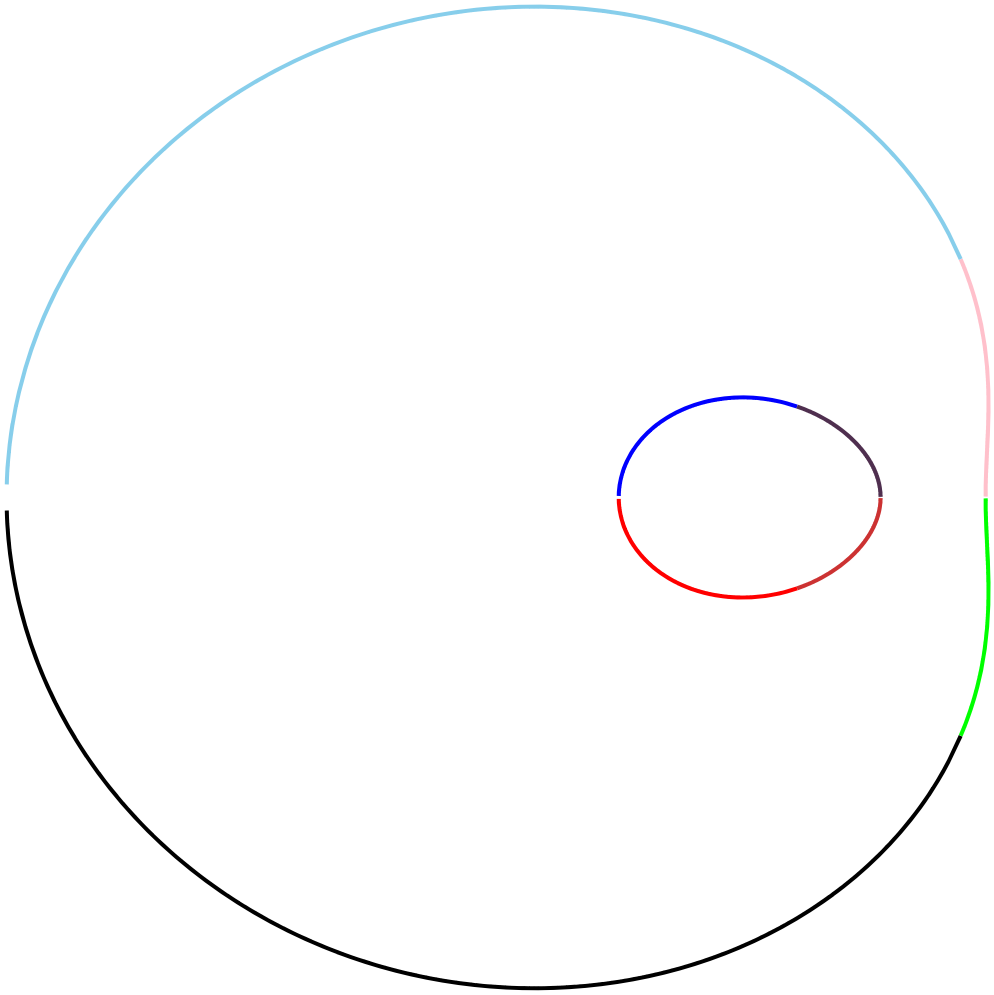
?

```
{{5, 6}, {5, 6, 8}, {5, 6, 9, 14}, {5, 6, 8, 15, 26}, {5, 6, 9, 14, 33, 62}, {5, 6, 8, 15, 26, 69,
    134}, {5, 6, 8, 15, 26, 69, 134, 393}, {5, 6, 8, 16, 39, 74, 213, 422, 1257}, {5, 6, 8, 15, 26,
    69, 134, 393, 1556, 4659}, {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659, 9314}}
> # TAJICOID 2,3 by H.E:
> restart:
```

`?` (3)

```
># takyokukyokusen LEVEL number 1-,6 shiyou tajicoid 2-7  no1.5+2002-3-19 :2023-8-3 rv
  by H.E:

> #(X1,Y1) to (X2,Y2) wo tooru Line he (0,0) yori kudasita suisen no asi (XP,YP):

> with(plots):
> XP:=(Y1*X2-X1*Y2)*(Y1-Y2)/((X1-X2)^2+(Y1-Y2)^2):
> YP:=(X1*Y2-Y1*X2)*(X1-X2)/((X1-X2)^2+(Y1-Y2)^2):
> sx12:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,XP):
> sy12:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,YP):
> sx23:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,XP):
> sy23:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,YP):


> # (X1,Y1) to (X2,Y2) wo tooru Line he (XS,0) yori kudasita suisen no asi (XP,YP):
> #shuusei:
> s:=(-X1*X2+X1^2+Y1^2-Y1*Y2+XS*(X2-X1))/((X1-X2)^2+(Y1-Y2)^2):

> XP:=s*(X2-X1)+X1:
> YP:=s*(Y2-Y1)+Y1:
```

```
> sx21:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,XP):
> sy21:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,YP):
> sx32:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,XP):
> sy32:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,YP):


> # (sx12,sy12)-(sx23,sy23)=line  kouten(XK,YK)  (sx21,sy21)-(sx32,sy32)=line:

> XK:=-((sx12*sy23-sy12*sx23)*(sx21-sx32)-(sx21*sy32-sx32*sy21)*(sx12-sx23))/((sy12-
  sy23)*(sx21-sx32)-(sy21-sy32)*(sx12-sx23)):
> YK:=((sy12-sy23)*(sx21*sy32-sx32*sy21)-(sy21-sy32)*(sx12*sy23-sx23*sy12))/((sy12-sy23)
  *(sx21-sx32)-(sy21-sy32)*(sx12-sx23)):

> # LEVEL NUMBER by H.E:'23-1-9 RV:'23-7-11:rv:

> CP := [black, green, violet, blue, red, orange, pink, "SkyBlue"]:
> with(StringTools): with(combinat):

> TP := {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659, 9314}: LP := choose(TP, 3):
> print( ): print(蛭子井博孝, LEVEL NUMBER, 10, {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659,
      9314}, の。tajicoid、3,  FormatTime("%Y-%m-%d-(%r)")) :for jj from 1 to nops(LP)
      do  for ii from 1 to 3 do a||ii := LP[jj][ii] :od : j := 0 : for i1 from −1 to 1 by 2 do for i2
      from −1 to 1 by 2 do   for i3 from −1 to 1 by 2 do   j := j + 1 : XD := subs(XS = t, x1
      = a||1, y1 = i1·sqrt((a||1)·t − (a||1)^2), x2 = a||2, y2 = i2·sqrt((a||2)·t − (a||2)^2), x3
      = a||3, y3 = i3·sqrt((a||3)·t − (a||3)^2), XK) : YD := subs(XS = t, x1 = a||1, y1 = i1
      ·sqrt((a||1)·t − (a||1)^2), x2 = a||2, y2 = i2·sqrt((a||2)·t − (a||2)^2), x3 = a||3, y3 = i3
      ·sqrt((a||3)·t − (a||3)^2), YK) : T||j := plot([XD, YD, t = a||3 .. ∞], axes = none, color
      = CP[j]) : od;od;od; print(display({seq(T||j, j = 1 ..8)})) : print(Tajicoid, 3, No(jj), a
      ||3, 焦点X座標, (seq(a||i, i = 1 ..3))), 蛭子井博孝, FormatTime("%Y-%m-%d-(%r)")) :
      print( ) :od:
                                        ?
蛭子井博孝, LEVEL NUMBER, 10, {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659, 9314},
    の。tajicoid、3,  "2023-12-15-(04:01:24 AM)"
```



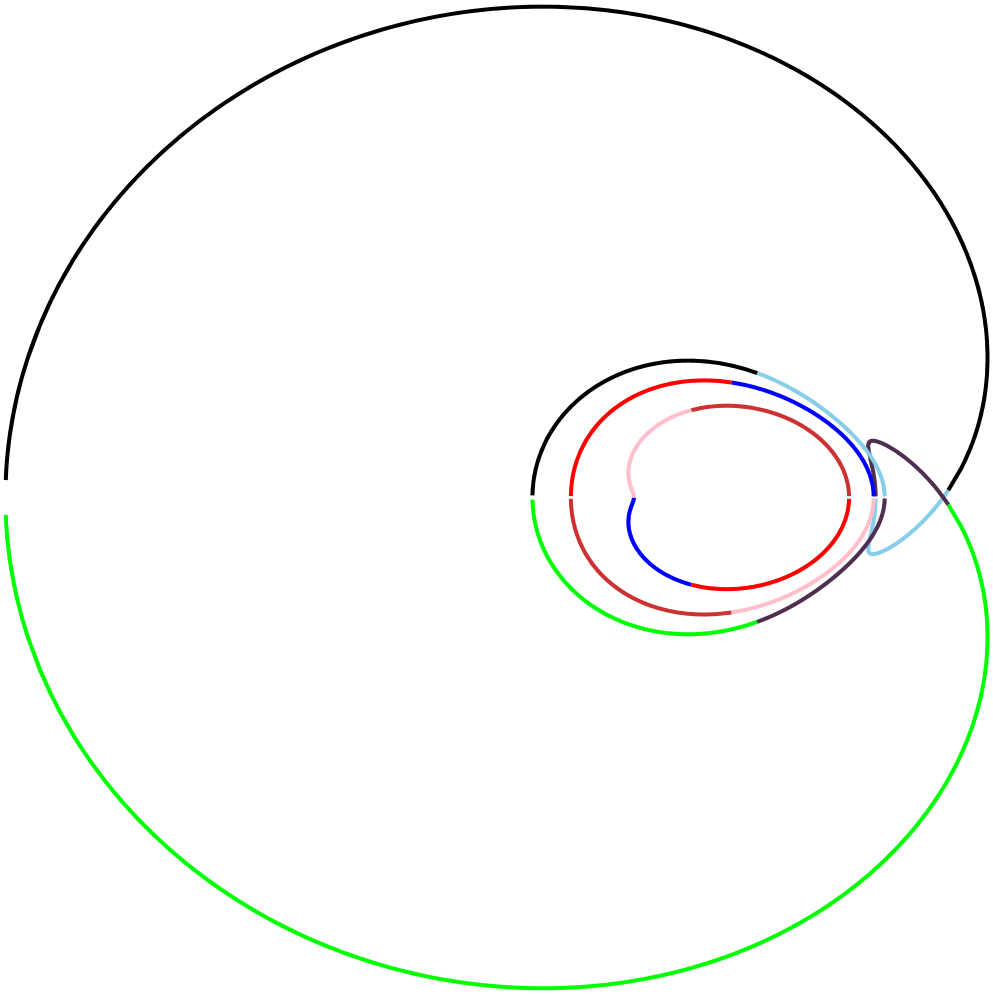
Tajicoid, 3, *No*(165), 9314, *焦点X座標*, 1556, 4659, 9314, *蛭子井博孝*,
"2023-12-15-(04:01:39 AM)"

?

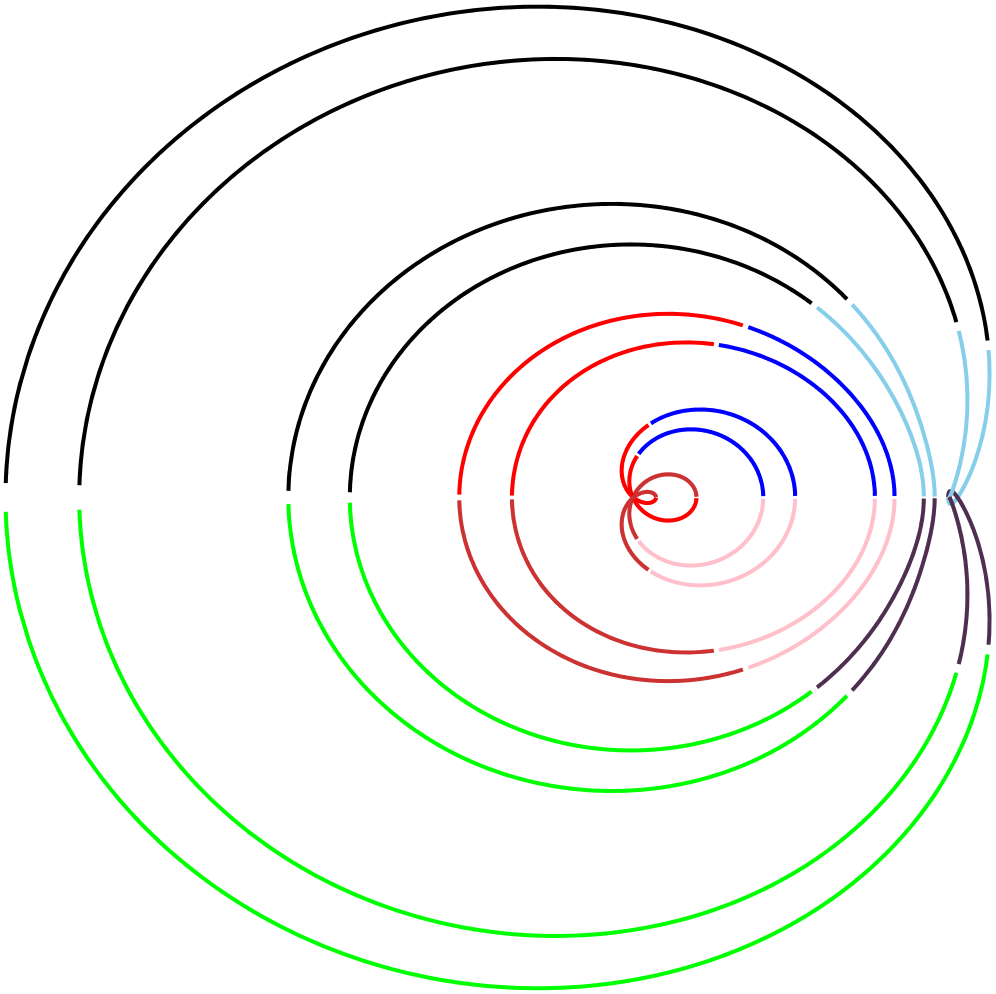
```
> # TAJICOID 4,5:
> restart:
> with(combinat):
> TP := {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659, 9314} : LP := choose(TP, 4) :

> #(X1,Y1) to (X2,Y2) wo tooru Line he (0,0) yori kudasita suisen no asi (XP,YP):LLPL:
>

> with(plots):
> XP:=(Y1*X2-X1*Y2)*(Y1-Y2)/((X1-X2)^2+(Y1-Y2)^2):
> YP:=(X1*Y2-Y1*X2)*(X1-X2)/((X1-X2)^2+(Y1-Y2)^2):
> qx12:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,XP):
> qy12:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,YP):
> qx23:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,XP):
> qy23:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,YP):
> qx34:=subs(X1=x3,Y1=y3,X2=x4,Y2=y4,XP):
> qy34:=subs(X1=x3,Y1=y3,X2=x4,Y2=y4,YP):
> qx45:=subs(X1=x4,Y1=y4,X2=x5,Y2=y5,XP):
> qy45:=subs(X1=x4,Y1=y4,X2=x5,Y2=y5,YP):
```

```
> rx12:=subs(X1=qx12,Y1=qy12,X2=qx23,Y2=qy23,XP):
> ry12:=subs(X1=qx12,Y1=qy12,X2=qx23,Y2=qy23,YP):
> rx23:=subs(X1=qx23,Y1=qy23,X2=qx34,Y2=qy34,XP):
> ry23:=subs(X1=qx23,Y1=qy23,X2=qx34,Y2=qy34,YP):
> rx34:=subs(X1=qx34,Y1=qy34,X2=qx45,Y2=qy45,XP):
> ry34:=subs(X1=qx34,Y1=qy34,X2=qx45,Y2=qy45,YP):

> sx12:=subs(X1=rx12,Y1=ry12,X2=rx23,Y2=ry23,XP):
> sy12:=subs(X1=rx12,Y1=ry12,X2=rx23,Y2=ry23,YP):
> sx23:=subs(X1=rx23,Y1=ry23,X2=rx34,Y2=ry34,XP):
> sy23:=subs(X1=rx23,Y1=ry23,X2=rx34,Y2=ry34,YP):

> # (X1,Y1) to (X2,Y2) wo tooru Line he (XS,0) yori kudasita suisen no asi (XP,YP):
> #shuusei:
> s:=(-X1*X2+X1^2+Y1^2-Y1*Y2+XS*(X2-X1))/((X1-X2)^2+(Y1-Y2)^2):

> XP:=s*(X2-X1)+X1:
> YP:=s*(Y2-Y1)+Y1:

> qx21:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,XP):
> qy21:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,YP):
> qx32:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,XP):
> qy32:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,YP):
> qx43:=subs(X1=x3,Y1=y3,X2=x4,Y2=y4,XP):
> qy43:=subs(X1=x3,Y1=y3,X2=x4,Y2=y4,YP):
> qx54:=subs(X1=x4,Y1=y4,X2=x5,Y2=y5,XP):
> qy54:=subs(X1=x4,Y1=y4,X2=x5,Y2=y5,YP):

> rx21:=subs(X1=qx21,Y1=qy21,X2=qx32,Y2=qy32,XP):
> ry21:=subs(X1=qx21,Y1=qy21,X2=qx32,Y2=qy32,YP):
> rx32:=subs(X1=qx32,Y1=qy32,X2=qx43,Y2=qy43,XP):
> ry32:=subs(X1=qx32,Y1=qy32,X2=qx43,Y2=qy43,YP):
> rx43:=subs(X1=qx43,Y1=qy43,X2=qx54,Y2=qy54,XP):
> ry43:=subs(X1=qx43,Y1=qy43,X2=qx54,Y2=qy54,YP):

> sx21:=subs(X1=rx21,Y1=ry21,X2=rx32,Y2=ry32,XP):
> sy21:=subs(X1=rx21,Y1=ry21,X2=rx32,Y2=ry32,YP):
> sx32:=subs(X1=rx32,Y1=ry32,X2=rx43,Y2=ry43,XP):
> sy32:=subs(X1=rx32,Y1=ry32,X2=rx43,Y2=ry43,YP):


> # (sx12,sy12)-(sx23,sy23)=line  kouten(XK,YK)  (sx21,sy21)-(sx32,sy32)=line:

> XK:=-((sx12*sy23-sy12*sx23)*(sx21-sx32)-(sx21*sy32-sx32*sy21)*(sx12-sx23))/((sy12-
  sy23)*(sx21-sx32)-(sy21-sy32)*(sx12-sx23)):
> YK:=((sy12-sy23)*(sx21*sy32-sx32*sy21)-(sy21-sy32)*(sx12*sy23-sx23*sy12))/((sy12-sy23)
```

```
  *(sx21-sx32)-(sy21-sy32)*(sx12-sx23)):
> with(combinat):
> CP := [black, green, violet, blue, red, orange, pink, "SkyBlue"] :
>with(StringTools) : TP := {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659, 9314} : LP :=
      choose(TP, 4) :
> for jj from 1 to nops(LP) do  for ii from 1 to 4 do a||ii := LP[jj][ii] :od : j := 0 : for i1
    from −1 to 1 by 2 do   for i2 from −1 to 1 by 2 do   for i3 from −1 to 1 by 2 do   for i4
    from −1 to 1 by 2 do j := j + 1 : XD := subs(XS = t, x1 = a||1, y1 = i1·sqrt((a||1)·t
    − (a||1)^2), x2 = a||2, y2 = i2·sqrt((a||2)·t − (a||2)^2), x3 = a||3, y3 = i3·sqrt((a||3)·t
    − (a||3)^2), x4 = a||4, y4 = i4·sqrt((a||4)·t − (a||4)^2), x5 = i4·sqrt((a||4)·t − (a
    ||4)^2), y5 = t − a||4, XK) :          YD := subs(XS = t, x1 = a||1, y1 = i1·sqrt((a||1)·t
    − (a||1)^2), x2 = a||2, y2 = i2·sqrt((a||2)·t − (a||2)^2), x3 = a||3, y3 = i3·sqrt((a||3)·t
    − (a||3)^2), x4 = a||4, y4 = i4·sqrt((a||4)·t − (a||4)^2), x5 = i4·sqrt((a||4)·t − (a
    ||4)^2), y5 = t − a||4, YK) : T||j := plot([XD, YD, t = a||4 .. ∞], axes = none, color
    = CP[(j mod 8) + 1]) : od;od;od;od; print(display({seq(T||j, j = 1 ..16)})) :
    print(Tajicoid , 4, No(jj), a||4, 焦点X座標, (seq(a||i, i = 1 ..4)), 蛭子井博孝,
    FormatTime("%Y-%m-%d-(%r)")) :od: TP := {5, 6, 8, 15, 26, 69, 134, 393, 1556, 4659,
    9314} : LP := choose(TP, 5) :for jj from 1 to nops(LP) do for ii from 1 to 5 do a||ii :=
    LP[jj][ii] :od : j := 0 : for i1 from −1 to 1 by 2 do   for i2 from −1 to 1 by 2 do   for i3
    from −1 to 1 by 2 do   for i4 from −1 to 1 by 2 do  :for i5 from −1 to 1 by 2 do j := j
    + 1 : XD := subs(XS = t, x1 = a||1, y1 = i1·sqrt((a||1)·t − (a||1)^2), x2 = a||2, y2 = i2
    ·sqrt((a||2)·t − (a||2)^2), x3 = a||3, y3 = i3·sqrt((a||3)·t − (a||3)^2), x4 = a||4, y4 = i4
    ·sqrt((a||4)·t − (a||4)^2), x5 = a||5, y5 = i5·sqrt((a||5)·t − (a||5)^2), XK) :
              YD := subs(XS = t, x1 = a||1, y1 = i1·sqrt((a||1)·t − (a||1)^2), x2 = a||2, y2 = i2
    ·sqrt((a||2)·t − (a||2)^2), x3 = a||3, y3 = i3·sqrt((a||3)·t − (a||3)^2), x4 = a||4, y4 = i4
    ·sqrt((a||4)·t − (a||4)^2), x5 = a||5, y5 = i5·sqrt((a||5)·t − (a||5)^2), YK) : T||j :=
    plot([XD, YD, t = a||5 .. ∞], axes = none, color = CP[(j mod 8) + 1]) : od;od;od;od;od;
    print(display({seq(T||j, j = 1 ..32)})) : print(Tajicoid , 5, No(jj), a||5, 焦点X座標,
    (seq(a||i, i = 1 ..5)), 蛭子井博孝, FormatTime("%Y-%m-%d-(%r)")) :od:
```



Tajicoid, 4, *No*(2), 26, *焦点X座標*, 5, 6, 8, 26, *蛭子井博孝*, "2023-12-15-(04:01:52 AM)"



Tajicoid, 5, *No*(402), 4659, *焦点X座標*, 8, 134, 393, 1556, 4659, *蛭子井博孝*,
"2023-12-15-(06:38:59 AM)"

```
> #TAJICOID 6,7 by H.E:
> restart:
> LP := {{5, 6}, {5, 6, 8}, {5, 6, 9, 14}, {5, 6, 8, 15, 26}, {5, 6, 9, 14, 33, 62}, {5, 6, 8, 15, 26,
      69, 134}};
>

> :

> #(X1,Y1) to (X2,Y2) wo tooru Line he (0,0) yori kudasita suisen no asi (XP,YP):

>
> with(plots):
> XP:=(Y1*X2-X1*Y2)*(Y1-Y2)/((X1-X2)^2+(Y1-Y2)^2):
> YP:=(X1*Y2-Y1*X2)*(X1-X2)/((X1-X2)^2+(Y1-Y2)^2):
> qx12:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,XP):
> qy12:=subs(X1=x1,Y1=y1,X2=x2,Y2=y2,YP):
> qx23:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,XP):
> qy23:=subs(X1=x2,Y1=y2,X2=x3,Y2=y3,YP):
> qx34:=subs(X1=x3,Y1=y3,X2=x4,Y2=y4,XP):
> qy34:=subs(X1=x3,Y1=y3,X2=x4,Y2=y4,YP):
> qx45:=subs(X1=x4,Y1=y4,X2=x5,Y2=y5,XP):
```

定理考

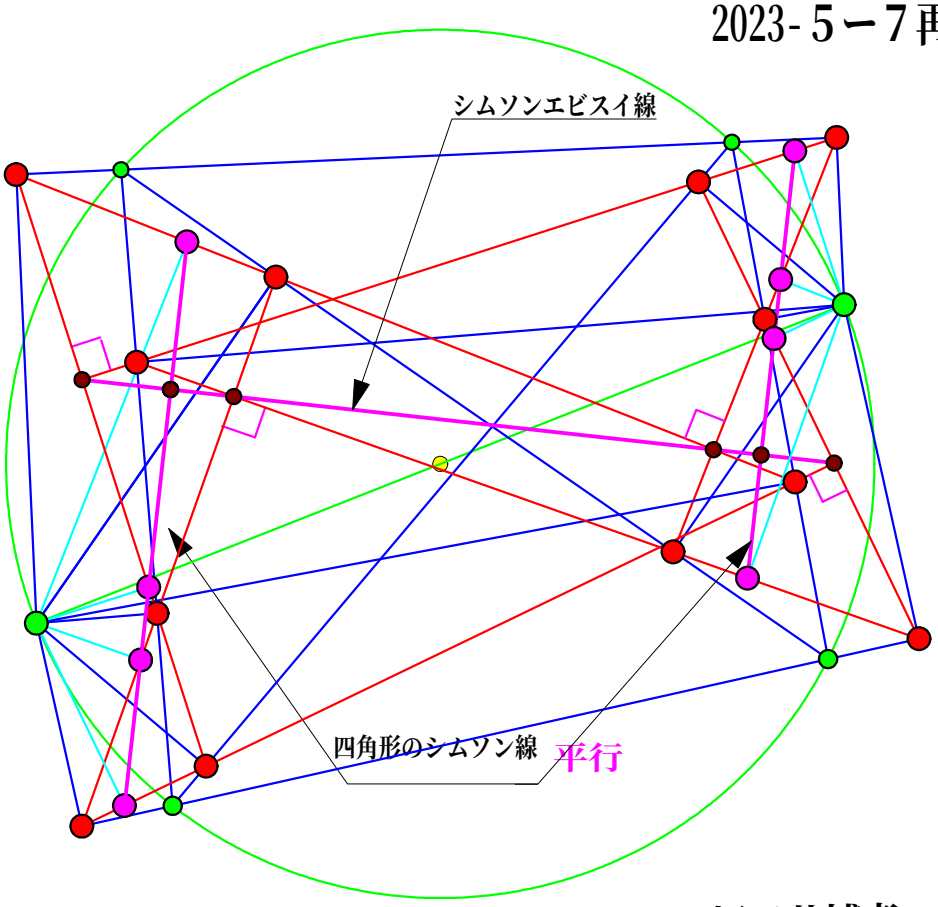
円に内接する四角形のシムソン線

三角形の直径の両端に関するシムソン線は直交するが、
四角形の直径の両端に関するシムソン線は、平行である、

四角形の4つの三角形のシムソン線への垂線の4つの足は、同一直線上にある
この直線を4角形のシムソン線という

直交するシムソン線4つの交点はシムソンエビスイ線上にあり平行する4角形のシムソン線と直交する

2023-５ー７再描清書



蛭子井博孝

3,4,5,6,7角形のシムソン線に関し、直交、平行が交互連鎖する
TAJICOIDの定理発見時に発見（エビスイの予想）