

**anti-Atik triangle****Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic):**

(ABC, 69), (anti-Ascella\*, 11245), (1st anti-circumperp\*, 6515), (anti-Conway\*, 14912), (2nd anti-Conway\*, 4), (anti-Euler, 18910), (3rd anti-Euler\*, 18911), (4th anti-Euler\*, 18912), (anti-excenters-reflections\*, 12324), (2nd anti-extouch\*, 2), (anti-Honsberger\*, 19119), (anti-Hutson intouch\*, 18913), (anti-incircle-circles\*, 18914), (anti-inverse-in-incircle\*, 1899), (6th anti-mixtilinear\*, 69), (1st anti-Sharygin\*, 19166), (anti-tangential-midarc\*, 18915), (circumorthic\*, 18916), (Ehrmann-side\*, 18917), (Ehrmann-vertex\*, 18918), (2nd Ehrmann\*, 18919), (Euler, 18920), (2nd Euler\*, 11411), (1st excosine\*, 13567), (extangents\*, 18921), (4th extouch, 69), (intangents\*, 18922), (1st Kenmotu diagonals\*, 18923), (2nd Kenmotu diagonals\*, 18924), (Kosnita\*, 18925), (Lucas antipodal tangential\*, 18926), (Lucas(-1) antipodal tangential\*, 18927), (orthic\*, 11433), (submedial\*, 18928), (tangential\*, 6776), (inner tri-equilateral\*, 18929), (outer tri-equilateral\*, 18930), (Trinh\*, 18931)

**Orthologic triangles and orthologic centers:**

(AAOA, 18932, 15136), (ABC, 18909, 3), (ABC-X3 reflections, 18909, 3), (anti-Aquila, 18909, 1385), (anti-Ara, 18909, 4), (anti-Ascella, 6643, 12160), (5th anti-Brocard, 18909, 3398), (2nd anti-circumperp-tangential, 18909, 1), (1st anti-circumperp, 6643, 11412), (anti-Conway, 6643, 12161), (2nd anti-Conway, 6643, 5), (anti-Euler, 18909, 20), (3rd anti-Euler, 6643, 5889), (4th anti-Euler, 6643, 11412), (anti-excenters-reflections, 6643, 12162), (2nd anti-extouch, 6643, 3), (anti-inner-Grebe, 18909, 3312), (anti-outer-Grebe, 18909, 3311), (anti-Honsberger, 6643, 19139), (anti-Hutson intouch, 6643, 12163), (anti-incircle-circles, 6643, 12164), (anti-inverse-in-incircle, 6643, 11411), (anti-Mandart-incircle, 18909, 11248), (6th anti-mixtilinear, 6643, 1216), (anti-orthocentroidal, 18933, 3581), (1st anti-Sharygin, 6643, 19194), (anti-tangential-midarc, 6643, 7352), (anticomplementary, 18909, 4), (AOA, 18932, 15123), (Aquila, 18909, 40), (Ara, 18909, 7387), (Aries, 18934, 7387), (1st Auriga, 18909, 11252), (2nd Auriga, 18909, 11253), (5th Brocard, 18909, 9821), (circumorthic, 6643, 5889), (2nd circumperp tangential, 18909, 11249), (Ehrmann-mid, 18909, 4), (Ehrmann-side, 6643, 18436), (Ehrmann-vertex, 6643, 9927), (1st Ehrmann, 18935, 576), (2nd Ehrmann, 6643, 8548), (Euler, 18909, 5), (2nd Euler, 6643, 5562), (1st excosine, 6643, 17834), (extangents, 6643, 6237), (outer-Garcia, 18909, 355), (Gossard, 18909, 11251), (inner-Grebe, 18909, 1161), (outer-Grebe, 18909, 1160), (Hatzipolakis-Moses, 18936, 9729), (1st Hyacinth, 18932, 10112), (2nd Hyacinth, 18934, 3), (intangents, 6643, 6238), (Johnson, 18909, 4), (inner-Johnson, 18909, 10525), (outer-Johnson, 18909, 10526), (1st Johnson-Yff, 18909, 1478), (2nd Johnson-Yff, 18909, 1479), (1st Kenmotu diagonals, 6643, 10665), (2nd Kenmotu diagonals, 6643, 10666), (Kosnita, 6643, 1147), (Lucas antipodal, 18937, 3), (Lucas antipodal tangential, 6643, 18939), (Lucas central, 18941, 3), (Lucas homothetic, 18909, 10669), (Lucas reflection, 18943, 10670), (Lucas(-1) antipodal, 18938, 3), (Lucas(-1) antipodal tangential, 6643, 18940), (Lucas(-1) central, 18942, 3), (Lucas(-1) homothetic, 18909, 10673), (Lucas(-1) reflection, 18944, 10674), (Macbeath, 18945, 4), (Mandart-incircle, 18909, 1), (medial, 18909, 5), (midheight, 4, 389), (5th mixtilinear, 18909, 1482), (orthic, 6643, 52), (orthocentroidal, 18933, 568), (reflection, 18946, 6243), (submedial, 6643, 5462), (tangential, 6643, 155), (inner tri-equilateral, 6643, 10661), (outer tri-equilateral, 6643, 10662), (3rd tri-squares-central, 18909, 8981), (4th tri-squares-central, 18909, 13966), (Trinh, 6643, 7689), (X3-ABC reflections, 18909, 3), (inner-Yff, 18909, 55), (outer-Yff, 18909, 56), (inner-Yff tangents, 18909, 10679), (outer-Yff tangents, 18909, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 18947, 15139), (AOA, 18947, 15126), (1st Hyacinth, 18947, 10116), (1st Parry, 18909, 351), (2nd Parry, 18909, 351)

## 2nd anti-circumperp-tangential triangle

### Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic):

(ABC\*, 56), (ABC-X3 reflections\*, 55), (anti-Aquila\*, 1319), (anti-Ara\*, 34), (5th anti-Brocard\*, 12835), (anti-Euler\*, 4293), (anti-inner-Grebe\*, 20087), (anti-outer-Grebe\*, 20088), (anti-Mandart-incircle\*, 11509), (anti-tangential-midarc, 1469), (anticomplementary\*, 388), (Aquila\*, 57), (Ara\*, 20046), (1st Auriga\*, 20047), (2nd Auriga\*, 20048), (5th Brocard\*, 20049), (2nd circumperp tangential\*, 56), (Ehrmann-mid\*, 3585), (Euler\*, 11), (4th extouch, 65), (5th extouch, 65), (outer-Garcia\*, 5252), (Gossard\*, 20050), (inner-Grebe\*, 20051), (outer-Grebe\*, 20052), (intangents, 6285), (intouch, 65), (Johnson\*, 1478), (inner-Johnson\*, 20053), (outer-Johnson\*, 20054), (1st Johnson-Yff\*, 388), (2nd Johnson-Yff\*, 4), (Lucas homothetic\*, 20055), (Lucas(-1) homothetic\*, 20056), (Mandart-excircles, 56), (Mandart-incircle\*, 1), (medial\*, 12), (3rd mixtilinear, 56), (5th mixtilinear\*, 2099), (3rd tri-squares-central\*, 20057), (4th tri-squares-central\*, 20058), (Ursa minor, 12688), (X3-ABC reflections\*, 999), (inner-Yff\*, 3), (outer-Yff\*, 999), (inner-Yff tangents\*, 11509), (outer-Yff tangents\*, 20059)

### Orthologic triangles and orthologic centers:

(AAOA, 18968, 7574), (ABC, 7354, 4), (ABC-X3 reflections, 7354, 20), (anti-Aquila, 7354, 946), (anti-Ara, 7354, 3575), (anti-Artzt, 5434, 2), (anti-Ascella, 1, 1593), (anti-Atik, 1, 18909), (1st anti-Brocard, 3023, 5999), (5th anti-Brocard, 7354, 12110), (6th anti-Brocard, 3023, 2456), (1st anti-circumperp, 1, 20), (anti-Conway, 1, 578), (2nd anti-Conway, 1, 389), (anti-Euler, 7354, 4), (3rd anti-Euler, 1, 12111), (4th anti-Euler, 1, 6241), (anti-excenters-reflections, 1, 4), (2nd anti-extouch, 1, 1181), (anti-inner-Grebe, 7354, 1588), (anti-outer-Grebe, 7354, 1587), (anti-Honsberger, 1, 182), (anti-Hutson intouch, 1, 3), (anti-incircle-circles, 1, 3), (anti-inverse-in-incircle, 1, 4), (anti-Mandart-incircle, 7354, 11500), (anti-McCay, 18969, 9855), (6th anti-mixtilinear, 1, 3), (anti-orthocentroidal, 3024, 12112), (1st anti-orthosymmedial, 6020, 19158), (1st anti-Sharygin, 1, 8884), (anti-tangential-midarc, 1, 1), (anticomplementary, 7354, 20), (AOA, 18968, 15122), (Aquila, 7354, 5691), (Ara, 7354, 3), (Aries, 18970, 9833), (Artzt, 5434, 2), (Ascella, 65, 3), (Atik, 65, 9856), (1st Auriga, 7354, 9834), (2nd Auriga, 7354, 9835), (1st Brocard-reflected, 18971, 3), (1st Brocard, 3023, 3), (5th Brocard, 7354, 9873), (6th Brocard, 3023, 20), (circumorthic, 1, 4), (2nd circumperp tangential, 7354, 12114), (1st circumperp, 65, 3), (2nd circumperp, 65, 3), (inner-Conway, 65, 8), (Conway, 65, 20), (2nd Conway, 65, 962), (3rd Conway, 65, 1), (Ehrmann-mid, 7354, 5), (Ehrmann-side, 1, 3), (Ehrmann-vertex, 1, 4), (1st Ehrmann, 1469, 3), (2nd Ehrmann, 1, 576), (Euler, 7354, 4), (2nd Euler, 1, 3), (3rd Euler, 65, 5), (4th Euler, 65, 5), (excenters-midpoints, 10944, 10), (excenters-reflections, 65, 7982), (excentral, 65, 40), (1st excosine, 1, 1498), (extangents, 1, 40), (extouch, 12688, 40), (2nd extouch, 65, 4), (3rd extouch, 3057, 4), (inner-Fermat, 18972, 3), (outer-Fermat, 18973, 3), (3rd Fermat-Dao, 18974, 13), (4th Fermat-Dao, 18975, 14), (7th Fermat-Dao, 18974, 13), (8th Fermat-Dao, 18975, 14), (11th Fermat-Dao, 18974, 4), (12th Fermat-Dao, 18975, 4), (15th Fermat-Dao, 18974, 19106), (16th Fermat-Dao, 18975, 19107), (Fuhrmann, 18976, 3), (2nd Fuhrmann, 18977, 3), (inner-Garcia, 11, 40), (outer-Garcia, 7354, 40), (Garcia-reflection, 10944, 1), (Gossard, 7354, 12113), (inner-Grebe, 7354, 5871), (outer-Grebe, 7354, 5870), (Hatzipolakakis-Moses, 18978, 12241), (hexyl, 65, 1), (Honsberger, 65, 390), (Hutson extouch, 18979, 40), (inner-Hutson, 65, 9836), (Hutson intouch, 65, 1), (outer-Hutson, 65, 9837), (1st Hyacinth, 18968, 6102), (2nd Hyacinth, 18970, 6146), (incircle-circles, 65, 1), (intangents, 1, 1), (intouch, 65, 1), (inverse-in-incircle, 65, 942), (1st isodynamic-Dao, 18974, 15), (2nd isodynamic-Dao, 18975, 16), (Johnson, 7354, 3), (inner-Johnson, 7354, 12114), (outer-Johnson, 7354, 11500), (1st Johnson-Yff, 7354, 55), (2nd Johnson-Yff, 7354, 56), (K798e, 18976, 3), (K798i, 18977, 3), (1st Kenmotu diagonals, 1, 371), (2nd Kenmotu diagonals, 1, 372), (Kosnita, 1, 3), (1st Lemoine-Dao, 18974, 6), (2nd Lemoine-Dao, 18975, 6), (Lucas antipodal tangential, 1, 18980), (Lucas homothetic, 7354, 9838), (Lucas(-1) antipodal tangential, 1, 18981), (Lucas(-1) homothetic, 7354, 9839), (Mandart-incircle, 7354, 6284), (McCay, 18969, 3), (medial, 7354, 3), (midheight, 6285, 4), (5th mixtilinear, 7354, 944), (6th mixtilinear, 65, 1), (inner-Napoleon, 18975, 3), (outer-Napoleon, 18974, 3), (1st Neuberg, 18982, 3), (2nd Neuberg, 18983, 3), (orthic, 1, 4), (orthocentroidal, 3024, 4), (1st orthosymmedial, 6020, 4), (2nd Pamfilos-Zhou, 65, 7596), (reflection, 18984, 4), (1st Schiffler, 18985, 79), (2nd Schiffler, 10944, 80), (1st Sharygin, 65, 9840), (submedial, 1, 5), (tangential, 1, 3), (tangential-midarc, 65, 8091), (2nd tangential-midarc, 65, 8092), (inner tri-equilateral, 1, 15), (outer tri-equilateral, 1, 16), (1st tri-squares-central, 18986, 13665), (2nd tri-squares-central, 18987, 13785), (3rd tri-squares-central, 7354, 485), (4th tri-squares-central, 7354, 486), (1st tri-squares, 5434, 3068), (2nd tri-squares, 5434, 3069), (3rd tri-squares, 18988, 485), (4th tri-squares, 18989, 486), (Trinh, 1, 3), (Ursa major, 65, 12672), (Ursa minor, 65, 65), (inner-Vecten, 18989, 3), (outer-Vecten, 18988, 3), (X3-ABC reflections, 7354, 382), (Yff central, 65, 8351), (inner-Yff, 7354, 1478), (outer-Yff, 7354, 1479), (inner-Yff tangents, 7354, 12115), (outer-Yff tangents, 7354, 12116), (1st Zaniah, 12688, 946), (2nd Zaniah, 65, 10)

### Parallelogic triangles and parallelogic centers:

(1st anti-Brocard, 3027, 385), (6th anti-Brocard, 3027, 1691), (anti-orthocentroidal, 3028, 323), (1st anti-orthosymmedial, 3320, 10313), (1st Brocard, 3027, 6), (6th Brocard, 3027, 194), (inner-Garcia, 1317, 1), (orthocentroidal, 3028, 2), (1st orthosymmedial, 3320, 6), (1st Parry, 7354, 9131), (2nd Parry, 7354, 9979), (2nd Sharygin, 65, 659)

**anti-inner-Grebe triangle**

**Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic, a dollar sign \$ means they are directly similar and \$- means they are inversely similar):**

(ABC\*, 6), (ABC-X3 reflections\*, 372), (anti-Aquila\*, 18991), (anti-Ara\*, 5411), (5th anti-Brocard\*, 18993), (2nd anti-circumperp-tangential\*, 18995), (anti-Conway, 6), (2nd anti-Conway, 6), (anti-Euler\*, 7582), (2nd anti-extouch, 18997), (anti-outer-Grebe\*, 6), (anti-Honsberger, 6), (anti-Mandart-incircle\*, 18999), (anti-orthocentroidal \$-, 19001), (anticomplementary\*, 7586), (Aquila\*, 19003), (Ara\*, 19005), (1st Auriga\*, 19007), (2nd Auriga\*, 19009), (2nd Brocard, 6), (5th Brocard\*, 19011), (2nd circumperp tangential\*, 19013), (circumsymmedial, 6), (Ehrmann-mid\*, 13785), (2nd Ehrmann, 6), (Euler\*, 1587), (1st excosine, 19015), (9th Fermat-Dao, 6), (10th Fermat-Dao, 6), (13th Fermat-Dao, 6), (14th Fermat-Dao, 6), (outer-Garcia\*, 13936), (Gossard\*, 19017), (inner-Grebe\*, 6), (outer-Grebe\*, 6), (Hatzipolakakis-Moses, 19019), (2nd Hyacinth, 19021), (Johnson\*, 7584), (inner-Johnson\*, 19023), (outer-Johnson\*, 19025), (1st Johnson-Yff\*, 19027), (2nd Johnson-Yff\*, 19029), (1st Kenmotu diagonals, 6), (2nd Kenmotu diagonals, 6), (Lucas homothetic\*, 19031), (Lucas(-1) homothetic\*, 19033), (Mandart-excircles, 19035), (Mandart-incircle\*, 19037), (medial\*, 3069), (midheight, 19039), (5th mixtilinear\*, 7968), (orthic, 19041), (orthocentroidal \$-, 19043), (2nd orthosymmedial, 6), (reflection, 19045), (symmedial, 6), (tangential, 6), (inner tri-equilateral, 6), (outer tri-equilateral, 6), (3rd tri-squares-central\*, 7585), (4th tri-squares-central\*, 2), (X3-ABC reflections\*, 6418), (inner-Yff\*, 3299), (outer-Yff\*, 3301), (inner-Yff tangents\*, 19047), (outer-Yff tangents\*, 19049)

**Orthologic triangles and orthologic centers:**

(AAOA, 19051, 7574), (ABC, 1588, 4), (ABC-X3 reflections, 1588, 20), (anti-Aquila, 1588, 946), (anti-Ara, 1588, 3575), (anti-Artzt, 19053, 2), (anti-Ascella, 3312, 1593), (anti-Atik, 3312, 18909), (1st anti-Brocard, 19055, 5999), (5th anti-Brocard, 1588, 12110), (6th anti-Brocard, 19055, 2456), (2nd anti-circumperp-tangential, 1588, 7354), (1st anti-circumperp, 3312, 20), (anti-Conway, 3312, 578), (2nd anti-Conway, 3312, 389), (anti-Euler, 1588, 4), (3rd anti-Euler, 3312, 12111), (4th anti-Euler, 3312, 6241), (anti-excenters-reflections, 3312, 4), (2nd anti-extouch, 3312, 1181), (anti-outer-Grebe, 1588, 1587), (anti-Honsberger, 3312, 182), (anti-Hutson intouch, 3312, 3), (anti-incircle-circles, 3312, 3), (anti-inverse-in-incircle, 3312, 4), (anti-Mandart-incircle, 1588, 11500), (anti-McCay, 19057, 9855), (6th anti-mixtilinear, 3312, 3), (anti-orthocentroidal, 19059, 12112), (1st anti-orthosymmedial, 19093, 19158), (1st anti-Sharygin, 3312, 8884), (anti-tangential-midarc, 3312, 1), (anticomplementary, 1588, 20), (AOA, 19051, 15122), (Aquila, 1588, 5691), (Ara, 1588, 3), (Aries, 19061, 9833), (Artzt, 19053, 2), (Ascella, 18992, 3), (Atik, 18992, 9856), (1st Auriga, 1588, 9834), (2nd Auriga, 1588, 9835), (1st Brocard-reflected, 19063, 3), (1st Brocard, 19055, 3), (5th Brocard, 1588, 9873), (6th Brocard, 19055, 20), (circumorthic, 3312, 4), (2nd circumperp tangential, 1588, 12114), (1st circumperp, 18992, 3), (2nd circumperp, 18992, 3), (inner-Conway, 18992, 8), (Conway, 18992, 20), (2nd Conway, 18992, 962), (3rd Conway, 18992, 1), (Ehrmann-mid, 1588, 5), (Ehrmann-side, 3312, 3), (Ehrmann-vertex, 3312, 4), (1st Ehrmann, 6, 3), (2nd Ehrmann, 3312, 576), (Euler, 1588, 4), (2nd Euler, 3312, 3), (3rd Euler, 18992, 5), (4th Euler, 18992, 5), (excenters-midpoints, 19065, 10), (excenters-reflections, 18992, 7982), (excentral, 18992, 40), (1st excosine, 3312, 1498), (extangents, 3312, 40), (extouch, 19067, 40), (2nd extouch, 18992, 4), (3rd extouch, 1703, 4), (inner-Fermat, 19069, 3), (outer-Fermat, 19071, 3), (3rd Fermat-Dao, 19073, 13), (4th Fermat-Dao, 19075, 14), (7th Fermat-Dao, 19073, 13), (8th Fermat-Dao, 19075, 14), (11th Fermat-Dao, 19073, 4), (12th Fermat-Dao, 19075, 4), (15th Fermat-Dao, 19073, 19106), (16th Fermat-Dao, 19075, 19107), (Fuhrmann, 19077, 3), (2nd Fuhrmann, 19079, 3), (inner-Garcia, 19081, 40), (outer-Garcia, 1588, 40), (Garcia-reflection, 19065, 1), (Gossard, 1588, 12113), (inner-Grebe, 1588, 5871), (outer-Grebe, 1588, 5870), (Hatzipolakakis-Moses, 19083, 12241), (hexyl, 18992, 1), (Honsberger, 18992, 390), (Hutson extouch, 19085, 40), (inner-Hutson, 18992, 9836), (Hutson intouch, 18992, 1), (outer-Hutson, 18992, 9837), (1st Hyacinth, 19051, 6102), (2nd Hyacinth, 19061, 6146), (incircle-circles, 18992, 1), (intangents, 3312, 1), (intouch, 18992, 1), (inverse-in-incircle, 18992, 942), (1st isodynamic-Dao, 19073, 15), (2nd isodynamic-Dao, 19075, 16), (Johnson, 1588, 3), (inner-Johnson, 1588, 12114), (outer-Johnson, 1588, 11500), (1st Johnson-Yff, 1588, 55), (2nd Johnson-Yff, 1588, 56), (K798e, 19077, 3), (K798i, 19079, 3), (1st Kenmotu diagonals, 3312, 371), (2nd Kenmotu diagonals, 3312, 372), (Kosnita, 3312, 3), (1st Lemoine-Dao, 19073, 6), (2nd Lemoine-Dao, 19075, 6), (Lucas antipodal tangential, 3312, 18980), (Lucas homothetic, 1588, 9838), (Lucas(-1) antipodal tangential, 3312, 18981), (Lucas(-1) homothetic, 1588, 9839), (Mandart-incircle, 1588, 6284), (McCay, 19057, 3), (medial, 1588, 3), (midheight, 19087, 4), (5th mixtilinear, 1588, 944), (6th mixtilinear, 18992, 1), (inner-Napoleon, 19075, 3), (outer-Napoleon, 19073, 3), (1st Neuberg, 19089, 3), (2nd Neuberg, 19091, 3), (orthic, 3312, 4), (orthocentroidal, 19059, 4), (1st orthosymmedial, 19093, 4), (2nd Pamfilos-Zhou, 18992, 7596), (reflection, 19095, 4), (1st Schiffler, 19097, 79), (2nd Schiffler, 19065, 80), (1st Sharygin, 18992, 9840), (submedial, 3312, 5), (tangential, 3312, 3), (tangential-midarc, 18992, 8091), (2nd tangential-midarc, 18992, 8092), (inner tri-equilateral, 3312, 15), (outer tri-equilateral, 3312, 16), (1st tri-squares-central, 19099, 13665), (2nd tri-squares-central, 19101, 13785), (3rd tri-squares-central, 1588, 485), (4th tri-squares-central, 1588, 486), (1st tri-squares, 19053, 3068), (2nd tri-squares, 19053, 3069), (3rd tri-squares, 19102, 485), (4th tri-squares, 19104, 486), (Trinh, 3312, 3), (Ursa major, 18992, 12672), (Ursa minor, 18992, 65), (inner-Vecten, 19104, 3), (outer-Vecten, 19102, 3), (X3-ABC reflections, 1588, 382), (Yff central, 18992, 8351), (inner-Yff, 1588, 1478), (outer-Yff, 1588, 1479), (inner-Yff tangents, 1588, 12115), (outer-Yff tangents, 1588, 12116), (1st Zaniah, 19067, 946), (2nd Zaniah, 18992, 10)

**Parallelogic triangles and parallelogic centers:**

(1st anti-Brocard, 19108, 385), (6th anti-Brocard, 19108, 1691), (anti-orthocentroidal, 19110, 323), (1st anti-orthosymmedial, 19114, 10313), (1st Brocard, 19108, 6), (6th Brocard, 19108, 194), (inner-Garcia, 19112, 1), (orthocentroidal, 19110, 2), (1st orthosymmedial, 19114, 6), (1st Parry, 1588, 9131), (2nd Parry, 1588, 9979), (2nd Sharygin, 18992, 659)

**anti-outer-Grebe triangle**

**Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic, a dollar sign \$ means they are directly similar and \$- means they are inversely similar):**

(ABC\*, 6), (ABC-X3 reflections\*, 371), (anti-Aquila\*, 18992), (anti-Ara\*, 5410), (5th anti-Brocard\*, 18994), (2nd anti-circumperp-tangential\*, 18996), (anti-Conway, 6), (2nd anti-Conway, 6), (anti-Euler\*, 7581), (2nd anti-extouch, 18998), (anti-inner-Grebe\*, 6), (anti-Honsberger, 6), (anti-Mandart-incircle\*, 19000), (anti-orthocentroidal \$-, 19002), (anticomplementary\*, 7585), (Aquila\*, 19004), (Ara\*, 19006), (1st Auriga\*, 19008), (2nd Auriga\*, 19010), (2nd Brocard, 6), (5th Brocard\*, 19012), (2nd circumperp tangential\*, 19014), (circumsymmedial, 6), (Ehrmann-mid\*, 13665), (2nd Ehrmann, 6), (Euler\*, 1588), (1st excosine, 19016), (9th Fermat-Dao, 6), (10th Fermat-Dao, 6), (13th Fermat-Dao, 6), (14th Fermat-Dao, 6), (outer-Garcia\*, 13883), (Gossard\*, 19018), (inner-Grebe\*, 6), (outer-Grebe\*, 6), (Hatzipolakis-Moses, 19020), (2nd Hyacinth, 19022), (Johnson\*, 7583), (inner-Johnson\*, 19024), (outer-Johnson\*, 19026), (1st Johnson-Yff\*, 19028), (2nd Johnson-Yff\*, 19030), (1st Kenmotu diagonals, 6), (2nd Kenmotu diagonals, 6), (Lucas homothetic\*, 19032), (Lucas(-1) homothetic\*, 19034), (Mandart-excircles, 19036), (Mandart-incircle\*, 19038), (medial\*, 3068), (midheight, 19040), (5th mixtilinear\*, 7969), (orthic, 19042), (orthocentroidal \$-, 19044), (2nd orthosymmedial, 6), (reflection, 19046), (symmedial, 6), (tangential, 6), (inner tri-equilateral, 6), (outer tri-equilateral, 6), (3rd tri-squares-central\*, 2), (4th tri-squares-central\*, 7586), (X3-ABC reflections\*, 6417), (inner-Yff\*, 3301), (outer-Yff\*, 3299), (inner-Yff tangents\*, 19048), (outer-Yff tangents\*, 19050)

**Orthologic triangles and orthologic centers:**

(AAOA, 19052, 7574), (ABC, 1587, 4), (ABC-X3 reflections, 1587, 20), (anti-Aquila, 1587, 946), (anti-Ara, 1587, 3575), (anti-Artzt, 19054, 2), (anti-Ascella, 3311, 1593), (anti-Atik, 3311, 18909), (1st anti-Brocard, 19056, 5999), (5th anti-Brocard, 1587, 12110), (6th anti-Brocard, 19056, 2456), (2nd anti-circumperp-tangential, 1587, 7354), (1st anti-circumperp, 3311, 20), (anti-Conway, 3311, 578), (2nd anti-Conway, 3311, 389), (anti-Euler, 1587, 4), (3rd anti-Euler, 3311, 12111), (4th anti-Euler, 3311, 6241), (anti-excenters-reflections, 3311, 4), (2nd anti-extouch, 3311, 1181), (anti-inner-Grebe, 1587, 1588), (anti-Honsberger, 3311, 182), (anti-Hutson intouch, 3311, 3), (anti-incircle-circles, 3311, 3), (anti-inverse-in-incircle, 3311, 4), (anti-Mandart-incircle, 1587, 11500), (anti-McCay, 19058, 9855), (6th anti-mixtilinear, 3311, 3), (anti-orthocentroidal, 19060, 12112), (1st anti-orthosymmedial, 19094, 19158), (1st anti-Sharygin, 3311, 8884), (anti-tangential-midarc, 3311, 1), (anticomplementary, 1587, 20), (AOA, 19052, 15122), (Aquila, 1587, 5691), (Ara, 1587, 3), (Aries, 19062, 9833), (Artzt, 19054, 2), (Ascella, 18991, 3), (Atik, 18991, 9856), (1st Auriga, 1587, 9834), (2nd Auriga, 1587, 9835), (1st Brocard-reflected, 19064, 3), (1st Brocard, 19056, 3), (5th Brocard, 1587, 9873), (6th Brocard, 19056, 20), (circumorthic, 3311, 4), (2nd circumperp tangential, 1587, 12114), (1st circumperp, 18991, 3), (2nd circumperp, 18991, 3), (inner-Conway, 18991, 8), (Conway, 18991, 20), (2nd Conway, 18991, 962), (3rd Conway, 18991, 1), (Ehrmann-mid, 1587, 5), (Ehrmann-side, 3311, 3), (Ehrmann-vertex, 3311, 4), (1st Ehrmann, 6, 3), (2nd Ehrmann, 3311, 576), (Euler, 1587, 4), (2nd Euler, 3311, 3), (3rd Euler, 18991, 5), (4th Euler, 18991, 5), (excenters-midpoints, 19066, 10), (excenters-reflections, 18991, 7982), (excentral, 18991, 40), (1st excosine, 3311, 1498), (extangents, 3311, 40), (extouch, 19068, 40), (2nd extouch, 18991, 4), (3rd extouch, 1702, 4), (inner-Fermat, 19072, 3), (outer-Fermat, 19070, 3), (3rd Fermat-Dao, 19074, 13), (4th Fermat-Dao, 19076, 14), (7th Fermat-Dao, 19074, 13), (8th Fermat-Dao, 19076, 14), (11th Fermat-Dao, 19074, 4), (12th Fermat-Dao, 19076, 4), (15th Fermat-Dao, 19074, 19106), (16th Fermat-Dao, 19076, 19107), (Fuhrmann, 19078, 3), (2nd Fuhrmann, 19080, 3), (inner-Garcia, 19082, 40), (outer-Garcia, 1587, 40), (Garcia-reflection, 19066, 1), (Gossard, 1587, 12113), (inner-Grebe, 1587, 5871), (outer-Grebe, 1587, 5870), (Hatzipolakis-Moses, 19084, 12241), (hexyl, 18991, 1), (Honsberger, 18991, 390), (Hutson extouch, 19086, 40), (inner-Hutson, 18991, 9836), (Hutson intouch, 18991, 1), (outer-Hutson, 18991, 9837), (1st Hyacinth, 19052, 6102), (2nd Hyacinth, 19062, 6146), (incircle-circles, 18991, 1), (intangents, 3311, 1), (intouch, 18991, 1), (inverse-in-incircle, 18991, 942), (1st isodynamic-Dao, 19074, 15), (2nd isodynamic-Dao, 19076, 16), (Johnson, 1587, 3), (inner-Johnson, 1587, 12114), (outer-Johnson, 1587, 11500), (1st Johnson-Yff, 1587, 55), (2nd Johnson-Yff, 1587, 56), (K798e, 19078, 3), (K798i, 19080, 3), (1st Kenmotu diagonals, 3311, 371), (2nd Kenmotu diagonals, 3311, 372), (Kosnita, 3311, 3), (1st Lemoine-Dao, 19074, 6), (2nd Lemoine-Dao, 19076, 6), (Lucas antipodal tangential, 3311, 18980), (Lucas homothetic, 1587, 9838), (Lucas(-1) antipodal tangential, 3311, 18981), (Lucas(-1) homothetic, 1587, 9839), (Mandart-incircle, 1587, 6284), (McCay, 19058, 3), (medial, 1587, 3), (midheight, 19088, 4), (5th mixtilinear, 1587, 944), (6th mixtilinear, 18991, 1), (inner-Napoleon, 19076, 3), (outer-Napoleon, 19074, 3), (1st Neuberg, 19090, 3), (2nd Neuberg, 19092, 3), (orthic, 3311, 4), (orthocentroidal, 19060, 4), (1st orthosymmedial, 19094, 4), (2nd Pamfilos-Zhou, 18991, 7596), (reflection, 19096, 4), (1st Schiffler, 19098, 79), (2nd Schiffler, 19066, 80), (1st Sharygin, 18991, 9840), (submedial, 3311, 5), (tangential, 3311, 3), (tangential-midarc, 18991, 8091), (2nd tangential-midarc, 18991, 8092), (inner tri-equilateral, 3311, 15), (outer tri-equilateral, 3311, 16), (1st tri-squares-central, 0, 13665), (2nd tri-squares-central, 19100, 13785), (3rd tri-squares-central, 1587, 485), (4th tri-squares-central, 1587, 486), (1st tri-squares, 19054, 3068), (2nd tri-squares, 19054, 3069), (3rd tri-squares, 19103, 485), (4th tri-squares, 19105, 486), (Trinh, 3311, 3), (Ursa major, 18991, 12672), (Ursa minor, 18991, 65), (inner-Vecten, 19105, 3), (outer-Vecten, 19103, 3), (X3-ABC reflections, 1587, 382), (Yff central, 18991, 8351), (inner-Yff, 1587, 1478), (outer-Yff, 1587, 1479), (inner-Yff tangents, 1587, 12115), (outer-Yff tangents, 1587, 12116), (1st Zaniah, 19068, 946), (2nd Zaniah, 18991, 10)

**Parallelogic triangles and parallelogic centers:**

(1st anti-Brocard, 19109, 385), (6th anti-Brocard, 19109, 1691), (anti-orthocentroidal, 19111, 323), (1st anti-orthosymmedial, 19115, 10313), (1st Brocard, 19109, 6), (6th Brocard, 19109, 194), (inner-Garcia, 19113, 1), (orthocentroidal, 19111, 2), (1st orthosymmedial, 19115, 6), (1st Parry, 1587, 9131), (2nd Parry, 1587, 9979), (2nd Sharygin, 18991, 659)

**anti-Honsberger triangle**

**Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic, a dollar sign \$ means they are directly similar and \$- means they are inversely similar):**

(ABC, 6), (anti-Ascella\*, 19118), (anti-Atik\*, 19119), (6th anti-Brocard, 19120), (1st anti-circumperp\*, 19121), (anti-Conway\*, 6), (2nd anti-Conway\*, 6), (3rd anti-Euler\*, 19122), (4th anti-Euler\*, 19123), (anti-excenters-reflections\*, 19124), (2nd anti-extouch\*, 19125), (anti-inner-Grebe, 6), (anti-outer-Grebe, 6), (anti-Hutson intouch\*, 5085), (anti-incircle-circles\*, 5050), (anti-inverse-in-incircle\*, 3618), (6th anti-mixtilinear\*, 19126), (1st anti-Sharygin\*, 19171), (anti-tangential-midarc\*, 1428), (1st Brocard, 19127), (2nd Brocard, 6), (circummedial, 110), (circumorthic\*, 19128), (circumsymmedial, 6), (Ehrmann-side\*, 19129), (Ehrmann-vertex\*, 19130), (2nd Ehrmann\*, 6), (2nd Euler\*, 19131), (1st excosine\*, 19132), (extangents\*, 19133), (9th Fermat-Dao, 6), (10th Fermat-Dao, 6), (13th Fermat-Dao, 6), (14th Fermat-Dao, 6), (inner-Grebe, 6), (outer-Grebe, 6), (intangents\*, 2330), (1st Kenmotu diagonals\*, 6), (2nd Kenmotu diagonals\*, 6), (Kosnita\*, 511), (Lucas antipodal tangential\*, 19134), (Lucas(-1) antipodal tangential\*, 19135), (medial, 206), (orthic\*, 1974), (1st orthosymmedial, 19136), (2nd orthosymmedial, 6), (submedial\*, 19137), (symmedial, 6), (tangential\*, 6), (inner tri-equilateral\*, 6), (outer tri-equilateral\*, 6), (Trinh\*, 5092)

**Orthologic triangles and orthologic centers:**

(AAOA, 19138, 15136), (ABC, 182, 3), (ABC-X3 reflections, 182, 3), (anti-Aquila, 182, 1385), (anti-Ara, 182, 4), (anti-Ascella, 19139, 12160), (anti-Atik, 19139, 6643), (5th anti-Brocard, 182, 3398), (2nd anti-circumperp-tangential, 182, 1), (1st anti-circumperp, 19139, 11412), (anti-Conway, 19139, 12161), (2nd anti-Conway, 19139, 5), (anti-Euler, 182, 20), (3rd anti-Euler, 19139, 5889), (4th anti-Euler, 19139, 11412), (anti-excenters-reflections, 19139, 12162), (2nd anti-extouch, 19139, 3), (anti-inner-Grebe, 182, 3312), (anti-outer-Grebe, 182, 3311), (anti-Hutson intouch, 19139, 12163), (anti-incircle-circles, 19139, 12164), (anti-inverse-in-incircle, 19139, 11411), (anti-Mandart-incircle, 182, 11248), (6th anti-mixtilinear, 19139, 1216), (anti-orthocentroidal, 19140, 3581), (1st anti-Sharygin, 19139, 19194), (anti-tangential-midarc, 19139, 7352), (anticomplementary, 182, 4), (AOA, 19138, 15123), (Aquila, 182, 40), (Ara, 182, 7387), (Aries, 19141, 7387), (1st Auriga, 182, 11252), (2nd Auriga, 182, 11253), (5th Brocard, 182, 9821), (circumorthic, 19139, 5889), (2nd circumperp tangential, 182, 11249), (Ehrmann-mid, 182, 4), (Ehrmann-side, 19139, 18436), (Ehrmann-vertex, 19139, 9927), (1st Ehrmann, 6, 576), (2nd Ehrmann, 19139, 8548), (Euler, 182, 5), (2nd Euler, 19139, 5562), (1st excosine, 19139, 17834), (extangents, 19139, 6237), (outer-Garcia, 182, 355), (Gossard, 182, 11251), (inner-Grebe, 182, 1161), (outer-Grebe, 182, 1160), (Hatzipolakis-Moses, 19142, 9729), (1st Hyacinth, 19138, 10112), (2nd Hyacinth, 19141, 3), (intangents, 19139, 6238), (Johnson, 182, 4), (inner-Johnson, 182, 10525), (outer-Johnson, 182, 10526), (1st Johnson-Yff, 182, 1478), (2nd Johnson-Yff, 182, 1479), (1st Kenmotu diagonals, 19139, 10665), (2nd Kenmotu diagonals, 19139, 10666), (Kosnita, 19139, 1147), (Lucas antipodal, 19143, 3), (Lucas antipodal tangential, 19139, 18939), (Lucas central, 19145, 3), (Lucas homothetic, 182, 10669), (Lucas reflection, 19147, 10670), (Lucas(-1) antipodal, 19144, 3), (Lucas(-1) antipodal tangential, 19139, 18940), (Lucas(-1) central, 19146, 3), (Lucas(-1) homothetic, 182, 10673), (Lucas(-1) reflection, 19148, 10674), (Macbeath, 5480, 4), (Mandart-incircle, 182, 1), (medial, 182, 5), (midheight, 19149, 389), (5th mixtilinear, 182, 1482), (orthic, 19139, 52), (orthocentroidal, 19140, 568), (reflection, 19150, 6243), (submedial, 19139, 5462), (tangential, 19139, 155), (inner tri-equilateral, 19139, 10661), (outer tri-equilateral, 19139, 10662), (3rd tri-squares-central, 182, 8981), (4th tri-squares-central, 182, 13966), (Trinh, 19139, 7689), (X3-ABC reflections, 182, 3), (inner-Yff, 182, 55), (outer-Yff, 182, 56), (inner-Yff tangents, 182, 10679), (outer-Yff tangents, 182, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 1177, 15139), (AOA, 1177, 15126), (1st Hyacinth, 1177, 10116), (1st Parry, 182, 351), (2nd Parry, 182, 351)

## 1st anti-orthosymmedial triangle

**Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic, a dollar sign \$ means they are directly similar and \$- means they are inversely similar):**  
 (ABC \$-, 1297), (circummedial, 112), (Macbeath, 19157), (1st orthosymmedial\*, 251)

### **Orthologic triangles and orthologic centers:**

(ABC, 19158, 1297), (ABC-X3 reflections, 19158, 112), (anti-Aquila, 19158, 12265), (anti-Ara, 19158, 12145), (5th anti-Brocard, 19158, 12207), (2nd anti-circumperp-tangential, 19158, 6020), (anti-Euler, 19158, 12253), (anti-inner-Grebe, 19158, 19093), (anti-outer-Grebe, 19158, 19094), (anti-Mandart-incircle, 19158, 12340), (anticomplementary, 19158, 12384), (Aquila, 19158, 12408), (Ara, 19158, 12413), (1st Auriga, 19158, 12478), (2nd Auriga, 19158, 12479), (5th Brocard, 19158, 12503), (2nd circumperp tangential, 19158, 19159), (Ehrmann-mid, 19158, 19160), (Euler, 19158, 127), (outer-Garcia, 19158, 12784), (Gossard, 19158, 12796), (inner-Grebe, 19158, 12805), (outer-Grebe, 19158, 12806), (Johnson, 19158, 12918), (inner-Johnson, 19158, 12925), (outer-Johnson, 19158, 12935), (1st Johnson-Yff, 19158, 12945), (2nd Johnson-Yff, 19158, 12955), (Lucas homothetic, 19158, 12996), (Lucas(-1) homothetic, 19158, 12997), (Mandart-incircle, 19158, 3320), (medial, 19158, 132), (5th mixtilinear, 19158, 13099), (1st orthosymmedial, 1297, 19161), (1st Parry, 10313, 9157), (2nd Parry, 10313, 13114), (3rd tri-squares-central, 19158, 13918), (4th tri-squares-central, 19158, 13985), (X3-ABC reflections, 19158, 13115), (inner-Yff, 19158, 13116), (outer-Yff, 19158, 13117), (inner-Yff tangents, 19158, 13118), (outer-Yff tangents, 19158, 13119)

### **Parallelogic triangles and parallelogic centers:**

(ABC, 10313, 112), (ABC-X3 reflections, 10313, 1297), (anti-Aquila, 10313, 11722), (anti-Ara, 10313, 13166), (5th anti-Brocard, 10313, 13195), (2nd anti-circumperp-tangential, 10313, 3320), (anti-Euler, 10313, 13200), (anti-inner-Grebe, 10313, 19114), (anti-outer-Grebe, 10313, 19115), (anti-Mandart-incircle, 10313, 13206), (anticomplementary, 10313, 13219), (Aquila, 10313, 13221), (Ara, 10313, 11641), (1st Auriga, 10313, 13229), (2nd Auriga, 10313, 13231), (5th Brocard, 10313, 13236), (2nd circumperp tangential, 10313, 19162), (Ehrmann-mid, 10313, 19163), (Euler, 10313, 132), (outer-Garcia, 10313, 13280), (Gossard, 10313, 13281), (inner-Grebe, 10313, 13282), (outer-Grebe, 10313, 13283), (Johnson, 10313, 10749), (inner-Johnson, 10313, 13294), (outer-Johnson, 10313, 13295), (1st Johnson-Yff, 10313, 13296), (2nd Johnson-Yff, 10313, 13297), (Lucas homothetic, 10313, 13298), (Lucas(-1) homothetic, 10313, 13299), (Mandart-incircle, 10313, 6020), (medial, 10313, 127), (5th mixtilinear, 10313, 10705), (1st Parry, 19158, 13114), (2nd Parry, 19158, 9157), (3rd tri-squares-central, 10313, 13923), (4th tri-squares-central, 10313, 13992), (X3-ABC reflections, 10313, 13310), (inner-Yff, 10313, 13311), (outer-Yff, 10313, 13312), (inner-Yff tangents, 10313, 13313), (outer-Yff tangents, 10313, 13314)

**1st anti-Sharygin triangle**

**Perspective triangles and perspectors (an asterisk \* means that triangles are homothetic, a dollar sign \$ means they are directly similar and \$- means they are inversely similar):**

(ABC, 8795), (anti-Ascella\*, 16030), (anti-Atik\*, 19166), (1st anti-circumperp\*, 97), (anti-Conway\*, 54), (2nd anti-Conway\*, 9792), (3rd anti-Euler\*, 19167), (4th anti-Euler\*, 19168), (anti-excenters-reflections\*, 19169), (2nd anti-extouch\*, 19170), (anti-Honsberger\*, 19171), (anti-Hutson intouch\*, 19172), (anti-incircle-circles\*, 19173), (anti-inverse-in-incircle\*, 19174), (6th anti-mixtilinear\*, 95), (anti-tangential-midarc\*, 19175), (circumorthic\*, 54), (Ehrmann-side\*, 19176), (Ehrmann-vertex\*, 19177), (2nd Ehrmann\*, 19178), (2nd Euler\*, 19179), (1st excosine\*, 19180), (extangents\*, 19181), (intangents\*, 19182), (1st Kenmotu diagonals\*, 19183), (2nd Kenmotu diagonals\*, 19184), (Kosnita\*, 19185), (Lucas antipodal tangential\*, 19186), (Lucas(-1) antipodal tangential\*, 19187), (orthic\*, 275), (submedial\*, 19188), (tangential\*, 19189), (inner tri-equilateral\*, 19190), (outer tri-equilateral\*, 19191), (Trinh\*, 19192)

**Orthologic triangles and orthologic centers:**

(AAOA, 19193, 15136), (ABC, 8884, 3), (ABC-X3 reflections, 8884, 3), (anti-Aquila, 8884, 1385), (anti-Ara, 8884, 4), (anti-Ascella, 19194, 12160), (anti-Atik, 19194, 6643), (5th anti-Brocard, 8884, 3398), (2nd anti-circumperp-tangential, 8884, 1), (1st anti-circumperp, 19194, 11412), (anti-Conway, 19194, 12161), (2nd anti-Conway, 19194, 5), (anti-Euler, 8884, 20), (3rd anti-Euler, 19194, 5889), (4th anti-Euler, 19194, 11412), (anti-excenters-reflections, 19194, 12162), (2nd anti-extouch, 19194, 3), (anti-inner-Grebe, 8884, 3312), (anti-outer-Grebe, 8884, 3311), (anti-Honsberger, 19194, 19139), (anti-Hutson intouch, 19194, 12163), (anti-incircle-circles, 19194, 12164), (anti-inverse-in-incircle, 19194, 11411), (anti-Mandart-incircle, 8884, 11248), (6th anti-mixtilinear, 19194, 1216), (anti-orthocentroidal, 19195, 3581), (anti-tangential-midarc, 19194, 7352), (anticomplementary, 8884, 4), (AOA, 19193, 15123), (Aquila, 8884, 40), (Ara, 8884, 7387), (Aries, 19196, 7387), (1st Auriga, 8884, 11252), (2nd Auriga, 8884, 11253), (5th Brocard, 8884, 9821), (circumorthic, 19194, 5889), (2nd circumperp tangential, 8884, 11249), (Ehrmann-mid, 8884, 4), (Ehrmann-side, 19194, 18436), (Ehrmann-vertex, 19194, 9927), (1st Ehrmann, 19197, 576), (2nd Ehrmann, 19194, 8548), (Euler, 8884, 5), (2nd Euler, 19194, 5562), (1st excosine, 19194, 17834), (extangents, 19194, 6237), (outer-Garcia, 8884, 355), (Gossard, 8884, 11251), (inner-Grebe, 8884, 1161), (outer-Grebe, 8884, 1160), (Hatzipolakis-Moses, 19198, 9729), (1st Hyacinth, 19193, 10112), (2nd Hyacinth, 19196, 3), (intangents, 19194, 6238), (Johnson, 8884, 4), (inner-Johnson, 8884, 10525), (outer-Johnson, 8884, 10526), (1st Johnson-Yff, 8884, 1478), (2nd Johnson-Yff, 8884, 1479), (1st Kenmotu diagonals, 19194, 10665), (2nd Kenmotu diagonals, 19194, 10666), (Kosnita, 19194, 1147), (Lucas antipodal, 19199, 3), (Lucas antipodal tangential, 19194, 18939), (Lucas central, 19201, 3), (Lucas homothetic, 8884, 10669), (Lucas reflection, 19203, 10670), (Lucas(-1) antipodal, 19200, 3), (Lucas(-1) antipodal tangential, 19194, 18940), (Lucas(-1) central, 19202, 3), (Lucas(-1) homothetic, 8884, 10673), (Lucas(-1) reflection, 19204, 10674), (Macbeath, 19205, 4), (Mandart-incircle, 8884, 1), (medial, 8884, 5), (midheight, 19206, 389), (5th mixtilinear, 8884, 1482), (orthic, 19194, 52), (orthocentroidal, 19195, 568), (reflection, 19207, 6243), (submedial, 19194, 5462), (tangential, 19194, 155), (inner tri-equilateral, 19194, 10661), (outer tri-equilateral, 19194, 10662), (3rd tri-squares-central, 8884, 8981), (4th tri-squares-central, 8884, 13966), (Trinh, 19194, 7689), (X3-ABC reflections, 8884, 3), (inner-Yff, 8884, 55), (outer-Yff, 8884, 56), (inner-Yff tangents, 8884, 10679), (outer-Yff tangents, 8884, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 19208, 15139), (AOA, 19208, 15126), (1st Hyacinth, 19208, 10116), (1st Parry, 8884, 351), (2nd Parry, 8884, 351)