

## AAOA 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, 67), (ABC-X3 reflections, 19374), (1st anti-Brocard, 19375), (anti-Hutson intouch \$-, 19376), (anti-incircle-circles \$-, 19377), (6th anti-mixtilinear \$-, 19378), (AOA\*, 5094), (Artzt, 15182), (circumsymmedial, 19379), (Ehrmann-side \$-, 18441), (2nd Euler \$-, 19380), (1st Hyacinth\*, 15134), (Kosnita \$-, 20035), (Lucas Brocard, 19382), (Lucas central, 19384), (Lucas inner, 19386), (Lucas inner tangential, 19388), (Lucas reflection, 19390), (Lucas secondary central, 19392), (Lucas 1st secondary tangents, 19394), (Lucas 2nd secondary tangents, 19396), (Lucas tangents, 19398), (Lucas(-1) Brocard, 19383), (Lucas(-1) central, 19385), (Lucas(-1) inner, 19387), (Lucas(-1) inner tangential, 19389), (Lucas(-1) reflection, 19391), (Lucas(-1) secondary central, 19393), (Lucas(-1) 1st secondary tangents, 19395), (Lucas(-1) 2nd secondary tangents, 19397), (Lucas(-1) tangents, 19399), (1st Pamfilos-Zhou, 0), (1st Sharygin, 19400), (2nd Sharygin, 19401), (symmedial, 15140), (tangential \$-, 15141), (Trinh \$-, 19402), (X3-ABC reflections, 19403)

**Orthologic triangles and orthologic centers:**

(ABC, 7574, 265), (ABC-X3 reflections, 7574, 12121), (anti-Aquila, 7574, 12261), (anti-Ara, 7574, 12140), (anti-Ascella, 15136, 12168), (anti-Atik, 15136, 18932), (5th anti-Brocard, 7574, 12201), (2nd anti-circumperp-tangential, 7574, 18968), (1st anti-circumperp, 15136, 74), (anti-Conway, 15136, 12228), (2nd anti-Conway, 15136, 12236), (anti-Euler, 7574, 3448), (3rd anti-Euler, 15136, 12273), (4th anti-Euler, 15136, 12284), (anti-excenters-reflections, 15136, 12295), (2nd anti-extouch, 15136, 19456), (anti-inner-Grebe, 7574, 19051), (anti-outer-Grebe, 7574, 19052), (anti-Honsberger, 15136, 19138), (anti-Hutson intouch, 15136, 12302), (anti-incircle-circles, 15136, 12310), (anti-inverse-in-incircle, 15136, 12319), (anti-Mandart-incircle, 7574, 12334), (6th anti-mixtilinear, 15136, 6699), (anti-orthocentroidal, 3, 399), (1st anti-Sharygin, 15136, 19193), (anti-tangential-midarc, 15136, 19469), (anticomplementary, 7574, 12383), (AOA, 15133, 15115), (Aquila, 7574, 12407), (Ara, 7574, 12412), (Aries, 19477, 12419), (1st Auriga, 7574, 12466), (2nd Auriga, 7574, 12467), (5th Brocard, 7574, 12501), (circumorthic, 15136, 110), (2nd circumperp tangential, 7574, 19478), (Ehrmann-mid, 7574, 113), (Ehrmann-side, 15136, 265), (Ehrmann-vertex, 15136, 19479), (1st Ehrmann, 10510, 12584), (2nd Ehrmann, 15136, 12596), (Euler, 7574, 10113), (2nd Euler, 15136, 125), (1st excosine, 15136, 17838), (extangents, 15136, 12661), (outer-Garcia, 7574, 12778), (Gossard, 7574, 12790), (inner-Grebe, 7574, 12803), (outer-Grebe, 7574, 12804), (Hatzipolakis-Moses, 19480, 19481), (1st Hyacinth, 15133, 389), (2nd Hyacinth, 19477, 10111), (intangents, 15136, 12888), (Johnson, 7574, 110), (inner-Johnson, 7574, 12889), (outer-Johnson, 7574, 12890), (1st Johnson-Yff, 7574, 10088), (2nd Johnson-Yff, 7574, 10091), (1st Kenmotu diagonals, 15136, 12891), (2nd Kenmotu diagonals, 15136, 12892), (Kosnita, 15136, 12893), (Lucas antipodal tangents, 15136, 19482), (Lucas homothetic, 7574, 12894), (Lucas(-1) antipodal tangents, 15136, 19483), (Lucas(-1) homothetic, 7574, 12895), (Mandart-incircle, 7574, 12896), (medial, 7574, 1511), (midheight, 15138, 7687), (5th mixtilinear, 7574, 12898), (orthic, 15136, 113), (orthocentroidal, 3, 381), (reflection, 15137, 399), (submedial, 15136, 12900), (tangential, 15136, 2931), (inner tri-equilateral, 15136, 10663), (outer tri-equilateral, 15136, 10664), (3rd tri-squares-central, 7574, 13915), (4th tri-squares-central, 7574, 13979), (Trinh, 15136, 12901), (X3-ABC reflections, 7574, 12902), (inner-Yff, 7574, 12903), (outer-Yff, 7574, 12904), (inner-Yff tangents, 7574, 12905), (outer-Yff tangents, 7574, 12906)

**Parallelogic triangles and parallelogic centers:**

(anti-Ascella, 15139, 13171), (anti-Atik, 15139, 18947), (1st anti-circumperp, 15139, 110), (anti-Conway, 15139, 13198), (2nd anti-Conway, 15139, 1112), (3rd anti-Euler, 15139, 13201), (4th anti-Euler, 15139, 7731), (anti-excenters-reflections, 15139, 13202), (2nd anti-extouch, 15139, 19504), (anti-Honsberger, 15139, 1177), (anti-Hutson intouch, 15139, 2935), (anti-incircle-circles, 15139, 9919), (anti-inverse-in-incircle, 15139, 13203), (6th anti-mixtilinear, 15139, 5972), (1st anti-Sharygin, 15139, 19208), (anti-tangential-midarc, 15139, 19505), (circumorthic, 15139, 74), (Ehrmann-side, 15139, 7728), (Ehrmann-vertex, 15139, 19506), (2nd Ehrmann, 15139, 13248), (2nd Euler, 15139, 113), (1st excosine, 15139, 17847), (extangents, 15139, 10119), (intangents, 15139, 10118), (1st Kenmotu diagonals, 15139, 13287), (2nd Kenmotu diagonals, 15139, 13288), (Kosnita, 15139, 13289), (Lucas antipodal tangents, 15139, 19507), (Lucas(-1) antipodal tangents, 15139, 19508), (orthic, 15139, 125), (1st Parry, 7574, 13290), (2nd Parry, 7574, 13291), (Schroeter, 858, 125), (Steiner, 858, 110), (submedial, 15139, 6723), (tangential, 15139, 10117), (inner tri-equilateral, 15139, 10681), (outer tri-equilateral, 15139, 10682), (Trinh, 15139, 13293)

## AOA 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):**  
(AAOA\*, 5094), (Artzt, 15181), (Euler, 15117), (1st Hyacinth\*, 15120), (medial, 15116), (midheight, 15118), (submedial \$-, 15119)

**Orthologic triangles and orthologic centers:**

(AAOA, 15115, 15133), (ABC, 15122, 265), (ABC-X3 reflections, 15122, 12121), (anti-Aquila, 15122, 12261), (anti-Ara, 15122, 12140), (anti-Ascella, 15123, 12168), (anti-Atik, 15123, 18932), (5th anti-Brocard, 15122, 12201), (2nd anti-circumperp-tangential, 15122, 18968), (1st anti-circumperp, 15123, 74), (anti-Conway, 15123, 12228), (2nd anti-Conway, 15123, 12236), (anti-Euler, 15122, 3448), (3rd anti-Euler, 15123, 12273), (4th anti-Euler, 15123, 12284), (anti-excenters-reflections, 15123, 12295), (2nd anti-extouch, 15123, 20110), (anti-inner-Grebe, 15122, 19051), (anti-outer-Grebe, 15122, 19052), (anti-Honsberger, 15123, 19138), (anti-Hutson intouch, 15123, 12302), (anti-incircle-circles, 15123, 12310), (anti-inverse-in-incircle, 15123, 12319), (anti-Mandart-incircle, 15122, 12334), (6th anti-mixtilinear, 15123, 6699), (anti-orthocentroidal, 5, 399), (1st anti-Sharygin, 15123, 19193), (anti-tangential-midarc, 15123, 19469), (anticomplementary, 15122, 12383), (Aquila, 15122, 12407), (Ara, 15122, 12412), (Aries, 19509, 12419), (1st Auriga, 15122, 12466), (2nd Auriga, 15122, 12467), (5th Brocard, 15122, 12501), (circumorthic, 15123, 110), (2nd circumperp tangential, 15122, 19478), (Ehrmann-mid, 15122, 113), (Ehrmann-side, 15123, 265), (Ehrmann-vertex, 15123, 19479), (1st Ehrmann, 20164, 12584), (2nd Ehrmann, 15123, 12596), (Euler, 15122, 10113), (2nd Euler, 15123, 125), (1st excosine, 15123, 17838), (extangents, 15123, 12661), (outer-Garcia, 15122, 12778), (Gossard, 15122, 12790), (inner-Grebe, 15122, 12803), (outer-Grebe, 15122, 12804), (Hatzipolakis-Moses, 19511, 19481), (1st Hyacinth, 15115, 389), (2nd Hyacinth, 19509, 10111), (intangents, 15123, 12888), (Johnson, 15122, 110), (inner-Johnson, 15122, 12889), (outer-Johnson, 15122, 12890), (1st Johnson-Yff, 15122, 10088), (2nd Johnson-Yff, 15122, 10091), (1st Kenmotu diagonals, 15123, 12891), (2nd Kenmotu diagonals, 15123, 12892), (Kosnita, 15123, 12893), (Lucas antipodal tangents, 15123, 19482), (Lucas homothetic, 15122, 12894), (Lucas(-1) antipodal tangents, 15123, 19483), (Lucas(-1) homothetic, 15122, 12895), (Mandart-incircle, 15122, 12896), (medial, 15122, 1511), (midheight, 15125, 7687), (5th mixtilinear, 15122, 12898), (orthic, 15123, 113), (orthocentroidal, 5, 381), (reflection, 15124, 399), (submedial, 15123, 12900), (tangential, 15123, 2931), (inner tri-equilateral, 15123, 10663), (outer tri-equilateral, 15123, 10664), (3rd tri-squares-central, 15122, 13915), (4th tri-squares-central, 15122, 13979), (Trinh, 15123, 12901), (X3-ABC reflections, 15122, 12902), (inner-Yff, 15122, 12903), (outer-Yff, 15122, 12904), (inner-Yff tangents, 15122, 12905), (outer-Yff tangents, 15122, 12906)

**Parallelogic triangles and parallelogic centers:**

(anti-Ascella, 15126, 13171), (anti-Atik, 15126, 18947), (1st anti-circumperp, 15126, 110), (anti-Conway, 15126, 13198), (2nd anti-Conway, 15126, 1112), (3rd anti-Euler, 15126, 13201), (4th anti-Euler, 15126, 7731), (anti-excenters-reflections, 15126, 13202), (2nd anti-extouch, 15126, 19504), (anti-Honsberger, 15126, 1177), (anti-Hutson intouch, 15126, 2935), (anti-incircle-circles, 15126, 9919), (anti-inverse-in-incircle, 15126, 13203), (6th anti-mixtilinear, 15126, 5972), (1st anti-Sharygin, 15126, 19208), (anti-tangential-midarc, 15126, 19505), (circumorthic, 15126, 74), (Ehrmann-side, 15126, 7728), (Ehrmann-vertex, 15126, 19506), (2nd Ehrmann, 15126, 13248), (2nd Euler, 15126, 113), (1st excosine, 15126, 17847), (extangents, 15126, 10119), (intangents, 15126, 10118), (1st Kenmotu diagonals, 15126, 13287), (2nd Kenmotu diagonals, 15126, 13288), (Kosnita, 15126, 13289), (Lucas antipodal tangents, 15126, 19507), (Lucas(-1) antipodal tangents, 15126, 19508), (orthic, 15126, 125), (1st Parry, 15122, 13290), (2nd Parry, 15122, 13291), (Schroeter, 5159, 125), (Steiner, 5159, 110), (submedial, 15126, 6723), (tangential, 15126, 10117), (inner tri-equilateral, 15126, 10681), (outer tri-equilateral, 15126, 10682), (Trinh, 15126, 13293))

**2<sup>nd</sup> anti-extouch 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, 3), (ABC-X3 reflections, 3), (anti-Ascella\*, 11402), (anti-Atik\*, 2), (1st anti-circumperp\*, 1993), (anti-Conway\*, 11402), (2nd anti-Conway\*, 25), (3rd anti-Euler\*, 5012), (4th anti-Euler\*, 54), (anti-excenters-reflections\*, 1498), (anti-inner-Grebe, 18997), (anti-outer-Grebe, 18998), (anti-Honsberger\*, 19125), (anti-Hutson intouch\*, 185), (anti-incircle-circles\*, 19347), (anti-inverse-in-incircle\*, 6776), (6th anti-mixtilinear\*, 394), (anti-orthocentroidal, 19348), (1st anti-Sharygin\*, 19170), (anti-tangential-midarc\*, 19349), (circumorthic\*, 7592), (Ehrmann-side\*, 18445), (Ehrmann-vertex\*, 18396), (2nd Ehrmann\*, 10602), (2nd Euler\*, 155), (1st excosine\*, 6), (extangents\*, 19350), (inner-Grebe, 19351), (outer-Grebe, 19352), (Hatzipolakis-Moses, 19353), (2nd Hyacinth, 3), (intangents\*, 19354), (1st Kenmotu diagonals\*, 19355), (2nd Kenmotu diagonals\*, 19356), (Kosnita\*, 19357), (Lucas antipodal, 3), (Lucas antipodal tangents\*, 19358), (Lucas central, 3), (Lucas(-1) antipodal, 3), (Lucas(-1) antipodal tangents\*, 19359), (Lucas(-1) central, 3), (midheight, 19360), (orthic\*, 6), (orthocentroidal, 19361), (reflection, 19362), (submedial\*, 10601), (tangential\*, 184), (inner tri-equilateral\*, 19363), (outer tri-equilateral\*, 19364), (Trinh\*, 10605), (X3-ABC reflections, 3)

**Orthologic triangles and orthologic centers:**

(AAOA, 19456, 15136), (ABC, 1181, 3), (ABC-X3 reflections, 1181, 3), (anti-Aquila, 1181, 1385), (anti-Ara, 1181, 4), (anti-Ascella, 3, 12160), (anti-Atik, 3, 6643), (5th anti-Brocard, 1181, 3398), (2nd anti-circumperp-tangential, 1181, 1), (1st anti-circumperp, 3, 11412), (anti-Conway, 3, 12161), (2nd anti-Conway, 3, 5), (anti-Euler, 1181, 20), (3rd anti-Euler, 3, 5889), (4th anti-Euler, 3, 11412), (anti-excenters-reflections, 3, 12162), (anti-inner-Grebe, 1181, 3312), (anti-outer-Grebe, 1181, 3311), (anti-Honsberger, 3, 19139), (anti-Hutson intouch, 3, 12163), (anti-incircle-circles, 3, 12164), (anti-inverse-in-incircle, 3, 11411), (anti-Mandart-incircle, 1181, 11248), (6th anti-mixtilinear, 3, 1216), (anti-orthocentroidal, 19457, 3581), (1st anti-Sharygin, 3, 19194), (anti-tangential-midarc, 3, 7352), (anticomplementary, 1181, 4), (AOA, 19456, 15123), (Aquila, 1181, 40), (Ara, 1181, 7387), (Aries, 19458, 7387), (1st Auriga, 1181, 11252), (2nd Auriga, 1181, 11253), (5th Brocard, 1181, 9821), (circumorthic, 3, 5889), (2nd circumperp tangential, 1181, 11249), (Ehrmann-mid, 1181, 4), (Ehrmann-side, 3, 18436), (Ehrmann-vertex, 3, 9927), (1st Ehrmann, 19459, 576), (2nd Ehrmann, 3, 8548), (Euler, 1181, 5), (2nd Euler, 3, 5562), (1st excosine, 3, 17834), (extangents, 3, 6237), (outer-Garcia, 1181, 355), (Gossard, 1181, 11251), (inner-Grebe, 1181, 1161), (outer-Grebe, 1181, 1160), (Hatzipolakis-Moses, 19460, 9729), (1st Hyacinth, 19456, 10112), (2nd Hyacinth, 19458, 3), (intangents, 3, 6238), (Johnson, 1181, 4), (inner-Johnson, 1181, 10525), (outer-Johnson, 1181, 10526), (1st Johnson-Yff, 1181, 1478), (2nd Johnson-Yff, 1181, 1479), (1st Kenmotu diagonals, 3, 10665), (2nd Kenmotu diagonals, 3, 10666), (Kosnita, 3, 1147), (Lucas antipodal, 19461, 3), (Lucas antipodal tangents, 3, 18939), (Lucas central, 19463, 3), (Lucas homothetic, 1181, 10669), (Lucas reflection, 19465, 10670), (Lucas(-1) antipodal, 19462, 3), (Lucas(-1) antipodal tangents, 3, 18940), (Lucas(-1) central, 19464, 3), (Lucas(-1) homothetic, 1181, 10673), (Lucas(-1) reflection, 19466, 10674), (Macbeath, 19467, 4), (Mandart-incircle, 1181, 1), (medial, 1181, 5), (midheight, 1593, 389), (5th mixtilinear, 1181, 1482), (orthic, 3, 52), (orthocentroidal, 19457, 568), (reflection, 19468, 6243), (submedial, 3, 5462), (tangential, 3, 155), (inner tri-equilateral, 3, 10661), (outer tri-equilateral, 3, 10662), (3rd tri-squares-central, 1181, 8981), (4th tri-squares-central, 1181, 13966), (Trinh, 3, 7689), (X3-ABC reflections, 1181, 3), (inner-Yff, 1181, 55), (outer-Yff, 1181, 56), (inner-Yff tangents, 1181, 10679), (outer-Yff tangents, 1181, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 19504, 15139), (AOA, 19504, 15126), (1st Hyacinth, 19504, 10116), (1st Parry, 1181, 351), (2nd Parry, 1181, 351)

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

(ABC, 65), (anti-Ascella\*, 1398), (anti-Atik\*, 18915), (2nd anti-circumperp-tangential, 1469), (1st anti-circumperp\*, 4296), (anti-Conway\*, 19365), (2nd anti-Conway\*, 19366), (3rd anti-Euler\*, 19367), (4th anti-Euler\*, 19368), (anti-excenters-reflections\*, 33), (2nd anti-extouch\*, 19349), (anti-Honsberger\*, 1428), (anti-Hutson intouch\*, 55), (anti-incircle-circles\*, 999), (anti-inverse-in-incircle\*, 388), (6th anti-mixtilinear\*, 1038), (1st anti-Sharygin\*, 19175), (circumorthic\*, 1870), (2nd circumperp, 109), (3rd Conway, 1), (Ehrmann-side\*, 18447), (Ehrmann-vertex\*, 3585), (2nd Ehrmann\*, 19369), (2nd Euler\*, 1060), (1st excosine\*, 221), (extangents\*, 65), (Fuhrmann, 10571), (outer-Garcia, 4551), (Garcia-reflection, 1), (hexyl, 1), (Hutson intouch, 1), (incentral, 221), (incircle-circles, 1), (intangents\*, 1), (intouch, 1), (1st Johnson-Yff, 73), (1st Kenmotu diagonals\*, 2067), (2nd Kenmotu diagonals\*, 6502), (Kosnita\*, 36), (Lucas antipodal tangents\*, 19370), (Lucas(-1) antipodal tangents\*, 19371), (Mandart-incircle, 7355), (mixtilinear, 3057), (3rd mixtilinear, 1319), (6th mixtilinear, 1), (orthic\*, 34), (submedial\*, 19372), (tangential\*, 56), (inner tri-equilateral\*, 7051), (outer tri-equilateral\*, 19373), (Trinh\*, 35)

**Orthologic triangles and orthologic centers:**

(AAOA, 19469, 15136), (ABC, 1, 3), (ABC-X3 reflections, 1, 3), (anti-Aquila, 1, 1385), (anti-Ara, 1, 4), (anti-Ascella, 7352, 12160), (anti-Atik, 7352, 6643), (5th anti-Brocard, 1, 3398), (2nd anti-circumperp-tangential, 1, 1), (1st anti-circumperp, 7352, 11412), (anti-Conway, 7352, 12161), (2nd anti-Conway, 7352, 5), (anti-Euler, 1, 20), (3rd anti-Euler, 7352, 5889), (4th anti-Euler, 7352, 11412), (anti-excenters-reflections, 7352, 12162), (2nd anti-extouch, 7352, 3), (anti-inner-Grebe, 1, 3312), (anti-outer-Grebe, 1, 3311), (anti-Honsberger, 7352, 19139), (anti-Hutson intouch, 7352, 12163), (anti-incircle-circles, 7352, 12164), (anti-inverse-in-incircle, 7352, 11411), (anti-Mandart-incircle, 1, 11248), (6th anti-mixtilinear, 7352, 1216), (anti-orthocentroidal, 19470, 3581), (1st anti-Sharygin, 7352, 19194), (anticomplementary, 1, 4), (AOA, 19469, 15123), (Aquila, 1, 40), (Ara, 1, 7387), (Aries, 20125, 7387), (1st Auriga, 1, 11252), (2nd Auriga, 1, 11253), (5th Brocard, 1, 9821), (circumorthic, 7352, 5889), (2nd circumperp tangential, 1, 11249), (Ehrmann-mid, 1, 4), (Ehrmann-side, 7352, 18436), (Ehrmann-vertex, 7352, 9927), (1st Ehrmann, 1469, 576), (2nd Ehrmann, 7352, 8548), (Euler, 1, 5), (2nd Euler, 7352, 5562), (1st excosine, 7352, 17834), (extangents, 7352, 6237), (outer-Garcia, 1, 355), (Gossard, 1, 11251), (inner-Grebe, 1, 1161), (outer-Grebe, 1, 1160), (Hatzipolakis-Moses, 19472, 9729), (1st Hyacinth, 19469, 10112), (2nd Hyacinth, 19471, 3), (intangents, 7352, 6238), (Johnson, 1, 4), (inner-Johnson, 1, 10525), (outer-Johnson, 1, 10526), (1st Johnson-Yff, 1, 1478), (2nd Johnson-Yff, 1, 1479), (1st Kenmotu diagonals, 7352, 10665), (2nd Kenmotu diagonals, 7352, 10666), (Kosnita, 7352, 1147), (Lucas antipodal, 19473, 3), (Lucas antipodal tangents, 7352, 18939), (Lucas central, 7362, 3), (Lucas homothetic, 1, 10669), (Lucas reflection, 19475, 10670), (Lucas(-1) antipodal, 19474, 3), (Lucas(-1) antipodal tangents, 7352, 18940), (Lucas(-1) central, 7353, 3), (Lucas(-1) homothetic, 1, 10673), (Lucas(-1) reflection, 19476, 10674), (Macbeath, 7354, 4), (Mandart-incircle, 1, 1), (medial, 1, 5), (midheight, 7355, 389), (5th mixtilinear, 1, 1482), (orthic, 7352, 52), (orthocentroidal, 19470, 568), (reflection, 7356, 6243), (submedial, 7352, 5462), (tangential, 7352, 155), (inner tri-equilateral, 7352, 10661), (outer tri-equilateral, 7352, 10662), (3rd tri-squares-central, 1, 8981), (4th tri-squares-central, 1, 13966), (Trinh, 7352, 7689), (X3-ABC reflections, 1, 3), (inner-Yff, 1, 55), (outer-Yff, 1, 56), (inner-Yff tangents, 1, 10679), (outer-Yff tangents, 1, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 19505, 15139), (AOA, 19505, 15126), (1st Hyacinth, 19505, 10116), (1st Parry, 1, 351), (2nd Parry, 1, 351)

### Lucas antipodal tangents 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):**

(anti-Ascella\*, 19404), (anti-Atik\*, 18926), (1st anti-circumperp\*, 19406), (anti-Conway\*, 19408), (2nd anti-Conway\*, 19410), (3rd anti-Euler\*, 19412), (4th anti-Euler\*, 19414), (anti-excenters-reflections\*, 19416), (2nd anti-extouch\*, 19358), (anti-Honsberger\*, 19134), (anti-Hutson intouch\*, 13021), (anti-incircle-circles\*, 19418), (anti-inverse-in-incircle\*, 19420), (6th anti-mixtilinear\*, 19422), (1st anti-Sharygin\*, 19186), (anti-tangential-midarc\*, 19370), (circumorthic\*, 20078), (Ehrmann-side\*, 18462), (Ehrmann-vertex\*, 18414), (2nd Ehrmann\*, 19426), (2nd Euler\*, 19428), (1st excosine\*, 19430), (extangents\*, 19432), (intangents\*, 19434), (1st Kenmotu diagonals\*, 19436), (2nd Kenmotu diagonals\*, 19439), (Kosnita\*, 19440), (Lucas homothetic, 12590), (Lucas tangents, 19442), (Lucas(-1) antipodal, 19444), (Lucas(-1) antipodal tangents\*, 9723), (orthic\*, 19446), (submedial\*, 19448), (tangential\*, 8939), (inner tri-equilateral\*, 19450), (outer tri-equilateral\*, 19452), (Trinh\*, 20108)

**Orthologic triangles and orthologic centers:**

(AAOA, 19482, 15136), (ABC, 18980, 3), (ABC-X3 reflections, 18980, 3), (anti-Aquila, 18980, 1385), (anti-Ara, 18980, 4), (anti-Ascella, 18939, 12160), (anti-Atik, 18939, 6643), (5th anti-Brocard, 18980, 3398), (2nd anti-circumperp-tangential, 18980, 1), (1st anti-circumperp, 18939, 11412), (anti-Conway, 18939, 12161), (2nd anti-Conway, 18939, 5), (anti-Euler, 18980, 20), (3rd anti-Euler, 18939, 5889), (4th anti-Euler, 18939, 11412), (anti-excenters-reflections, 18939, 12162), (2nd anti-extouch, 18939, 3), (anti-inner-Grebe, 18980, 3312), (anti-outer-Grebe, 18980, 3311), (anti-Honsberger, 18939, 19139), (anti-Hutson intouch, 18939, 12163), (anti-incircle-circles, 18939, 12164), (anti-inverse-in-incircle, 18939, 11411), (anti-Mandart-incircle, 18980, 11248), (6th anti-mixtilinear, 18939, 1216), (anti-orthocentroidal, 19484, 3581), (1st anti-Sharygin, 18939, 19194), (anti-tangential-midarc, 18939, 7352), (anticomplementary, 18980, 4), (AOA, 19482, 15123), (Aquila, 18980, 40), (Ara, 18980, 7387), (Aries, 19486, 7387), (1st Auriga, 18980, 11252), (2nd Auriga, 18980, 11253), (5th Brocard, 18980, 9821), (circumorthic, 18939, 5889), (2nd circumperp tangential, 18980, 11249), (Ehrmann-mid, 18980, 4), (Ehrmann-side, 18939, 18436), (Ehrmann-vertex, 18939, 9927), (1st Ehrmann, 12590, 576), (2nd Ehrmann, 18939, 8548), (Euler, 18980, 5), (2nd Euler, 18939, 5562), (1st excosine, 18939, 17834), (extangents, 18939, 6237), (outer-Garcia, 18980, 355), (Gossard, 18980, 11251), (inner-Grebe, 18980, 1161), (outer-Grebe, 18980, 1160), (Hatzipolakis-Moses, 19488, 9729), (1st Hyacinth, 19482, 10112), (2nd Hyacinth, 19486, 3), (intangents, 18939, 6238), (Johnson, 18980, 4), (inner-Johnson, 18980, 10525), (outer-Johnson, 18980, 10526), (1st Johnson-Yff, 18980, 1478), (2nd Johnson-Yff, 18980, 1479), (1st Kenmotu diagonals, 18939, 10665), (2nd Kenmotu diagonals, 18939, 10666), (Kosnita, 18939, 1147), (Lucas antipodal, 19490, 3), (Lucas central, 19492, 3), (Lucas homothetic, 18980, 10669), (Lucas reflection, 13021, 10670), (Lucas(-1) antipodal, 3, 3), (Lucas(-1) antipodal tangents, 18939, 18940), (Lucas(-1) central, 19495, 3), (Lucas(-1) homothetic, 18980, 10673), (Lucas(-1) reflection, 19496, 10674), (Macbeath, 19498, 4), (Mandart-incircle, 18980, 1), (medial, 18980, 5), (midheight, 19500, 389), (5th mixtilinear, 18980, 1482), (orthic, 18939, 52), (orthocentroidal, 19484, 568), (reflection, 19502, 6243), (submedial, 18939, 5462), (tangential, 18939, 155), (inner tri-equilateral, 18939, 10661), (outer tri-equilateral, 18939, 10662), (3rd tri-squares-central, 18980, 8981), (4th tri-squares-central, 18980, 13966), (Trinh, 18939, 7689), (X3-ABC reflections, 18980, 3), (inner-Yff, 18980, 55), (outer-Yff, 18980, 56), (inner-Yff tangents, 18980, 10679), (outer-Yff tangents, 18980, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 19507, 15139), (AOA, 19507, 15126), (1st Hyacinth, 19507, 10116), (1st Parry, 18980, 351), (2nd Parry, 18980, 351)

**Lucas(-1) antipodal tangents 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):**

(anti-Ascella\*, 19405), (anti-Atik\*, 18927), (1st anti-circumperp\*, 19407), (anti-Conway\*, 19409), (2nd anti-Conway\*, 19411), (3rd anti-Euler\*, 19413), (4th anti-Euler\*, 19415), (anti-excenters-reflections\*, 19417), (2nd anti-extouch\*, 19359), (anti-Honsberger\*, 19135), (anti-Hutson intouch\*, 13022), (anti-incircle-circles\*, 20073), (anti-inverse-in-incircle\*, 19421), (6th anti-mixtilinear\*, 19423), (1st anti-Sharygin\*, 19187), (anti-tangential-midarc\*, 19371), (circumorthic\*, 19425), (Ehrmann-side\*, 18463), (Ehrmann-vertex\*, 18415), (2nd Ehrmann\*, 19427), (2nd Euler\*, 19429), (1st excosine\*, 19431), (extangents\*, 19433), (intangents\*, 19435), (1st Kenmotu diagonals\*, 19438), (2nd Kenmotu diagonals\*, 19437), (Kosnita\*, 19441), (Lucas antipodal, 19445), (Lucas antipodal tangents\*, 9723), (Lucas(-1) homothetic, 12591), (Lucas(-1) tangents, 19443), (orthic\*, 19447), (submedial\*, 19449), (tangential\*, 8943), (inner tri-equilateral\*, 19451), (outer tri-equilateral\*, 19453), (Trinh\*, 19455)

**Orthologic triangles and orthologic centers:**

(AAOA, 19483, 15136), (ABC, 18981, 3), (ABC-X3 reflections, 18981, 3), (anti-Aquila, 18981, 1385), (anti-Ara, 18981, 4), (anti-Ascella, 18940, 12160), (anti-Atik, 18940, 6643), (5th anti-Brocard, 18981, 3398), (2nd anti-circumperp-tangential, 18981, 1), (1st anti-circumperp, 18940, 11412), (anti-Conway, 18940, 12161), (2nd anti-Conway, 18940, 5), (anti-Euler, 18981, 20), (3rd anti-Euler, 18940, 5889), (4th anti-Euler, 18940, 11412), (anti-excenters-reflections, 18940, 12162), (2nd anti-extouch, 18940, 3), (anti-inner-Grebe, 18981, 3312), (anti-outer-Grebe, 18981, 3311), (anti-Honsberger, 18940, 19139), (anti-Hutson intouch, 18940, 12163), (anti-incircle-circles, 18940, 12164), (anti-inverse-in-incircle, 18940, 11411), (anti-Mandart-incircle, 18981, 11248), (6th anti-mixtilinear, 18940, 1216), (anti-orthocentroidal, 19485, 3581), (1st anti-Sharygin, 18940, 19194), (anti-tangential-midarc, 18940, 7352), (anticomplementary, 18981, 4), (AOA, 19483, 15123), (Aquila, 18981, 40), (Ara, 18981, 7387), (Aries, 19487, 7387), (1st Auriga, 18981, 11252), (2nd Auriga, 18981, 11253), (5th Brocard, 18981, 9821), (circumorthic, 18940, 5889), (2nd circumperp tangential, 18981, 11249), (Ehrmann-mid, 18981, 4), (Ehrmann-side, 18940, 18436), (Ehrmann-vertex, 18940, 9927), (1st Ehrmann, 12591, 576), (2nd Ehrmann, 18940, 8548), (Euler, 18981, 5), (2nd Euler, 18940, 5562), (1st excosine, 18940, 17834), (extangents, 18940, 6237), (outer-Garcia, 18981, 355), (Gossard, 18981, 11251), (inner-Grebe, 18981, 1161), (outer-Grebe, 18981, 1160), (Hatzipolakis-Moses, 19489, 9729), (1st Hyacinth, 20137, 10112), (2nd Hyacinth, 19487, 3), (intangents, 18940, 6238), (Johnson, 18981, 4), (inner-Johnson, 18981, 10525), (outer-Johnson, 18981, 10526), (1st Johnson-Yff, 18981, 1478), (2nd Johnson-Yff, 18981, 1479), (1st Kenmotu diagonals, 18940, 10665), (2nd Kenmotu diagonals, 18940, 10666), (Kosnita, 18940, 1147), (Lucas antipodal, 3, 3), (Lucas antipodal tangents, 18940, 18939), (Lucas central, 19494, 3), (Lucas homothetic, 18981, 10669), (Lucas reflection, 19497, 10670), (Lucas(-1) antipodal, 19491, 3), (Lucas(-1) central, 19493, 3), (Lucas(-1) homothetic, 18981, 10673), (Lucas(-1) reflection, 13022, 10674), (Macbeath, 19499, 4), (Mandart-incircle, 18981, 1), (medial, 18981, 5), (midheight, 19501, 389), (5th mixtilinear, 18981, 1482), (orthic, 18940, 52), (orthocentroidal, 19485, 568), (reflection, 19503, 6243), (submedial, 18940, 5462), (tangential, 18940, 155), (inner tri-equilateral, 18940, 10661), (outer tri-equilateral, 18940, 10662), (3rd tri-squares-central, 18981, 8981), (4th tri-squares-central, 18981, 13966), (Trinh, 18940, 7689), (X3-ABC reflections, 18981, 3), (inner-Yff, 18981, 55), (outer-Yff, 18981, 56), (inner-Yff tangents, 18981, 10679), (outer-Yff tangents, 18981, 10680)

**Parallelogic triangles and parallelogic centers:**

(AAOA, 19508, 15139), (AOA, 19508, 15126), (1st Hyacinth, 19508, 10116), (1st Parry, 18981, 351), (2nd Parry, 18981, 351)