BARYCENTRIC COORDINATES OF LATERAL INCONICS RELATED TRIANGLES

The following table contains the barycentric coordinates of the A-perspectors-triangle and the A-centers-triangle of the lateral inconics of (U, X). In this table, u=sqrt(a), v=sqrt(b), w=sqrt(c) and x=sqrt(-a+b+c), y=sqrt(a-b+c), z=sqrt(a+b-c).

U, X	Perspector of the A-lateral inconic(U, X)	Center of the A-lateral inconic(U, X)
1, 2	{a/(u^2*(v-w)^2), b/(v^2*(u+w)^2), c/((u+v)^2*w^2)}	{a*(b*(u+v)^2*w^2+c*v^2*(u+w)^2), b*(c*u^2*(v-w)^2+a*(u+v)^2*w^2), c*(b*u^2*(v-w)^2+a*v^2*(u+w)^2)}
1, 6	{a/(v-w)^2, b/(u+w)^2, c/(u+v)^2}	{a*(b*(u+v)^2+c*(u+w)^2), b*(a*(u+v)^2+c*(v-w)^2), c*(b*(v-w)^2+a*(u+w)^2)}
1, 7	{a/(u^2*x^2*(v*y-w*z)^2), b/(v^2*y^2*(u*x+w*z)^2), c/(w^2*(u*x+v*y)^2*z^2)}	{a*(b*w^2*(u*x+v*y)^2*z^2+c*v^2*y^2*(u*x+w*z)^2), b*(a*w^2*(u*x+v*y)^2*z^2+c*u^2*x^2*(v*y-w*z)^2), c*(b*u^2*x^2*(v*y-w*z)^2+a*v^2*y^2*(u*x+w*z)^2)}
1, 8	{a/(u^2*(w*y-v*z)^2), b/(v^2*(w*x+u*z)^2), c/(w^2*(v*x+u*y)^2)}	{a*(b*w^2*(v*x+u*y)^2+c*v^2*(w*x+u*z)^2), b*(a*w^2*(v*x+u*y)^2+c*u^2*(w*y-v*z)^2), c*(a*v^2*(w*x+u*z)^2+b*u^2*(w*y-v*z)^2)}
1, 55	{a/(v*y-w*z)^2, b/(u*x+w*z)^2, c/(u*x+v*y)^2}	{a*(b*(u*x+v*y)^2+c*(u*x+w*z)^2), b*(a*(u*x+v*y)^2+c*(v*y-w*z)^2), c*(b*(v*y-w*z)^2+a*(u*x+w*z)^2)}
1, 56	{a/(x^2*(w*y-v*z)^2), b/(y^2*(w*x+u*z)^2), c/((v*x+u*y)^2*z^2)}	{a*(b*(v*x+u*y)^2*z^2+c*y^2*(w*x+u*z)^2), b*(a*(v*x+u*y)^2*z^2+c*x^2*(w*y-v*z)^2), c*(a*y^2*(w*x+u*z)^2+b*x^2*(w*y-v*z)^2)}
2, 6	{a/(u^2*(v^2-w^2)^2), b/(v^2*(u^2+w^2)^2), c/((u^2+v^2)^2*w^2)}	{a*(b*(u^2+v^2)^2*w^2+c*v^2*(u^2+w^2)^2), b*(a*(u^2+v^2)^2*w^2+c*u^2*(v^2-w^2)^2), c*(b*u^2*(v^2-w^2)^2+a*v^2*(u^2+w^2)^2)}
2, 7	{a/(u^2*x^2*(y-z)^2), b/(v^2*y^2*(x+z)^2), c/(w^2*(x+y)^2*z^2)}	{a*(b*w^2*(x+y)^2*z^2+c*v^2*y^2*(x+z)^2), b*(c*u^2*x^2*(y-z)^2+a*w^2*(x+y)^2*z^2), c*(b*u^2*x^2*(y-z)^2+a*v^2*y^2*(x+z)^2)}
2, 8	{a/(u^2*(y-z)^2), b/(v^2*(x+z)^2), c/(w^2*(x+y)^2)}	{a*(b*w^2*(x+y)^2+c*v^2*(x+z)^2), b*(a*w^2*(x+y)^2+c*u^2*(y-z)^2), c*(b*u^2*(y-z)^2+a*v^2*(x+z)^2)}
2, 55	{a/(u^2*(v^2*y-w^2*z)^2), b/(v^2*(u^2*x+w^2*z)^2), c/(w^2*(u^2*x+v^2*y)^2)}	{a*(b*w^2*(u^2*x+v^2*y)^2+c*v^2*(u^2*x+w^2*z)^2), b*(a*w^2*(u^2*x+v^2*y)^2+c*u^2*(v^2*y-w^2*z)^2), c*(b*u^2*(v^2*y-w^2*z)^2+a*v^2*(u^2*x+w^2*z)^2)}
2, 56	{a/(u^2*x^2*(w^2*y-v^2*z)^2), b/(v^2*y^2*(w^2*x+u^2*z)^2), c/(w^2*(v^2*x+u^2*y)^2*z^2)}	{a*(b*w^2*(v^2*x+u^2*y)^2*z^2+c*v^2*y^2*(w^2*x+u^2*z)^2), b*(a*w^2*(v^2*x+u^2*y)^2*z^2+c*x^2*(w^2*y-v^2*z)^2), c*(a*v^2*y^2*(w^2*x+u^2*z)^2+b*u^2*x^2*(w^2*y-v^2*z)^2)}
6, 7	{a/(u^2*x^2*(v^2*y-w^2*z)^2), b/(v^2*y^2*(u^2*x+w^2*z)^2), c/(w^2*(u^2*x+v^2*y)^2*z^2)}	{a*(b*w^2*(u^2*x+v^2*y)^2*z^2+c*v^2*y^2*(u^2*x+w^2*z)^2), b*(a*w^2*(u^2*x+v^2*y)^2*z^2+c*u^2*x^2*(v^2*y-w^2*z)^2), c*(b*u^2*x^2*(v^2*y-w^2*z)^2+a*v^2*y^2*(u^2*x+w^2*z)^2)}
6, 8	{a/(u^2*(w^2*y-v^2*z)^2), b/(v^2*(w^2*x+u^2*z)^2), c/(w^2*(v^2*x+u^2*y)^2)}	{a*(b*w^2*(v^2*x+u^2*y)^2+c*v^2*(w^2*x+u^2*z)^2), b*(a*w^2*(v^2*x+u^2*y)^2+c*u^2*(w^2*y-v^2*z)^2), c*(a*v^2*(w^2*x+u^2*z)^2+b*u^2*(w^2*y-v^2*z)^2)}
6, 55	{(a*u^2)/(y-z)^2, (b*v^2)/(x+z)^2, (c*w^2)/(x+y)^2}	{a*u^2*(b*v^2*(x+y)^2+c*w^2*(x+z)^2), b*v^2*(a*u^2*(x+y)^2+c*w^2*(y-z)^2), c*w^2*(b*v^2*(y-z)^2+a*u^2*(x+z)^2)}

U, X	Perspector of the A-lateral inconic(U, X)	Center of the A-lateral inconic(U, X)
6, 56	{ (a*u^2)/(x^2*(y-z)^2), (b*v^2)/(y^2*(x+z)^2), (c*w^2)/(z^2*(x+y)^2) }	{a*u^2*(b*v^2*(x+y)^2*z^2+c*w^2*y^2*(x+z)^2), b*v^2*(c*w^2*x^2*(y-z)^2+a*u^2*(x+y)^2*z^2), c*w^2*(b*v^2*x^2*(y-z)^2+a*u^2*y^2*(x+z)^2) }
7, 8	{a/(u^2*x^2*(y^2-z^2)^2), b/(v^2*y^2*(x^2+z^2)^2), c/(w^2*z^2*(x^2+y^2)^2) }	{a*(b*w^2*z^2*(x^2+y^2)^2+c*v^2*y^2*(x^2+z^2)^2), b*(a*w^2*z^2*(x^2+y^2)^2+c*u^2*x^2*(y^2-z^2)^2), c*(b*u^2*x^2*(y^2-z^2)^2+a*v^2*y^2*(x^2+z^2)^2) }
7, 55	{a/(u^2*x^2*(v^2*y^2-w^2*z^2)^2), b/(v^2*y^2*(u^2*x^2+w^2*z^2)^2), c/(w^2*z^2*(u^2*x^2+v^2*y^2)^2) }	{a*(b*w^2*z^2*(u^2*x^2+v^2*y^2)^2+c*v^2*y^2*(u^2*x^2+w^2*z^2)^2), b*(a*w^2*z^2*(u^2*x^2+v^2*y^2)^2+c*u^2*x^2*(v^2*y^2-w^2*z^2)^2), c*(b*u^2*x^2*(v^2*y^2-w^2*z^2)^2+a*v^2*y^2*(u^2*x^2+w^2*z^2)^2) }
7, 56	{a/(u^2*x^2*(v^2-w^2)^2), b/(v^2*y^2*(u^2+w^2)^2), c/(w^2*z^2*(u^2+v^2)^2) }	{a*(c*v^2*y^2*(u^2+w^2)^2+b*w^2*z^2*(u^2+v^2)^2), b*(c*u^2*x^2*(v^2-w^2)^2+a*w^2*z^2*(u^2+v^2)^2), c*(b*u^2*x^2*(v^2-w^2)^2+a*v^2*y^2*(u^2+w^2)^2) }
8, 55	{ (a*x^2)/(u^2*(v^2-w^2)^2), (b*y^2)/(v^2*(u^2+w^2)^2), (c*z^2)/(w^2*(u^2+v^2)^2) }	{a*x^2*(b*w^2*y^2*(u^2+v^2)^2+c*v^2*z^2*(u^2+w^2)^2), b*y^2*(a*w^2*x^2*(u^2+v^2)^2+c*u^2*z^2*(u^2+w^2)^2), c*z^2*(a*v^2*x^2*(u^2+w^2)^2+b*u^2*y^2*(v^2-w^2)^2) }
8, 56	{a/(u^2*x^2*((w^2*y^2)-v^2*z)^2), b/(v^2*y^2*(w^2*x^2+u^2*z^2)^2), c/(w^2*z^2*(v^2*x^2+u^2*y^2)^2) }	{a*(b*w^2*z^2*(v^2*x^2+u^2*y^2)^2+c*v^2*y^2*(w^2*x^2+u^2*z^2)^2), b*(a*w^2*z^2*(v^2*x^2+u^2*y^2)^2+c*u^2*x^2*(-(w^2*y^2)+v^2*z)^2), c*(a*v^2*y^2*(w^2*x^2+u^2*z^2)^2+b*u^2*x^2*(-(w^2*y^2)+v^2*z)^2) }
55, 56	{ (a*u^2)/(x^2*(y^2-z^2)^2), (b*v^2)/(y^2*(x^2+z^2)^2), (c*w^2)/(z^2*(x^2+y^2)^2) }	{a*u^2*(b*v^2*z^2*(x^2+y^2)^2+c*w^2*y^2*(x^2+z^2)^2), b*v^2*(a*u^2*z^2*(x^2+y^2)^2+c*w^2*x^2*(y^2-z^2)^2), c*w^2*(a*u^2*y^2*(x^2+z^2)^2+b*v^2*x^2*(y^2-z^2)^2) }
PU(1)	{ (a*u^2)/(u^4-v^2*w^2)^2, (b*v^2)/(v^4+u^2*w^2)^2, (c*w^2)/(w^4+u^2*v^2)^2}	{a*u^2*(b*v^2*(w^4+u^2*v^2)^2+c*w^2*(v^4+u^2*w^2)^2), b*v^2*(a*u^2*(w^4+u^2*v^2)^2+c*w^2*(u^4+v^2*w^2)^2), c*w^2*(a*u^2*(v^4+u^2*w^2)^2+b*v^2*(u^4+v^2*w^2)^2) }
PU(11)	{a/(u^2*(u^4-v^2*w^2)^2), b/(v^2*(v^4+u^2*w^2)^2), c/(w^2*(w^4+u^2*v^2)^2) }	{a*(b*w^2*(w^4+u^2*v^2)^2+c*v^2*(v^4+u^2*w^2)^2), b*(a*w^2*(w^4+u^2*v^2)^2+c*u^2*(u^4-v^2*w^2)^2), c*(a*v^2*(v^4+u^2*w^2)^2+b*u^2*(u^4-v^2*w^2)^2) }
3, 4	{1/((b-c)^2*(a+b+c)^2*(-a^2+b^2+c^2)), 1/((a+b-c)^2*(a+c)^2*(a^2-b^2+c^2)), 1/((a+b)^2*(a-b+c)^2*(a^2+b^2-c^2)) }	{a*(-2*a^6-2*a^5*(b+c)+2*a^3*(b-c)*(b^2-c^2)+4*a*b*(b-c)*c*(b^2-c^2)-(b-c)^2*(b^2-c^2)^2+a^4*(b^2-4*b*c+c^2)+2*a^2*(b-c)^2*(b^2+3*b*c+c^2)), b*(-a^6-2*a^5*c+2*a^3*(b-c)*(b^2-2*c^2)+a^4*(2*b^2-4*b*c+c^2)+a^2*(b-c)*(b^3+b*(3*b-5*c)*c-c^3)-2*a*(b-c)^2*(b^3+c^3)-(b-c)*(b^2-c^2)*(2*b^3+b*c^2+c^3)), c*(-a^6-2*a^5*b+2*a^3*(b-c)*(2*b^2-c^2)+a^4*(b^2-4*b*c+2*c^2)+a^2*(b-c)*(b^3+b*(5*b-3*c)*c-c^3)-2*a*(b-c)^2*(b^3+c^3)-(b-c)*(b^2-c^2)*(b^3+b^2*c+2*c^3)) }