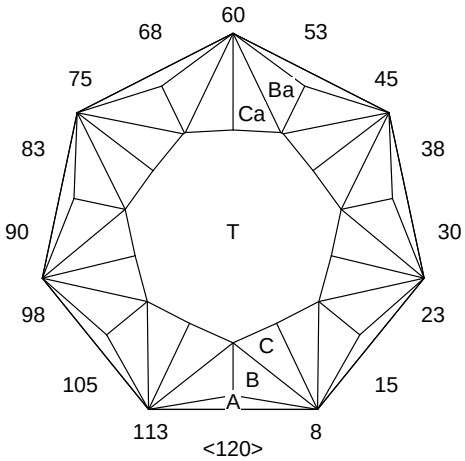

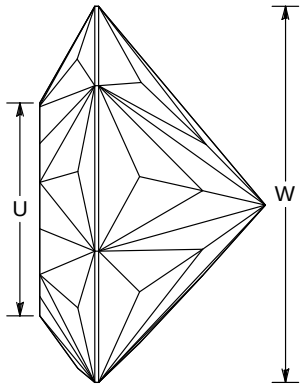

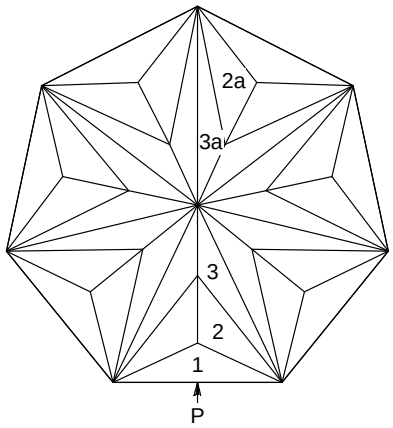

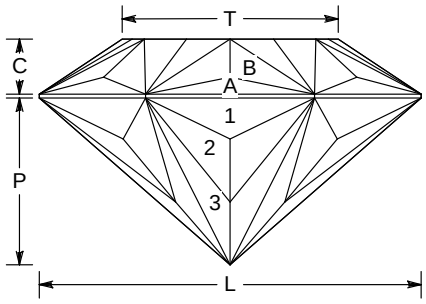

Heptagonal star - 120 index

By Jón Olaf Svane, 7. april 2003

This is my contribution to the ongoing discussion of odd-indexed cuts.
I don't own a 77-index wheel, so i used the nearest - my 120 index wheel
Angles for R.I. = 1.540
71 + 7 girdles = 78 facets
1-fold, mirror-image symmetry
120 index
L/W = 1.015 T/W = 0.574 U/W = 0.566
P/W = 0.443 C/W = 0.146
Vol./W³ = 0.194

PAVILION

P	90.00°	120-017-034-051-069-086-103	As close to regular heptagon as possible
1	46.00°	120-017-034-051-069-086-103	Even girdle
2	43.00°	001-016-018-033-035-050-070-085-087-102-104-119	Meet P 1
2a	43.00°	052-068	Cheat a bit towards 60 and/or adjust angle
3	42.00°	002-015-019-032-036-049-071-084-088-101-105-118	Meet P 1 2
3a	41.77°	053.3-066.7	Cheat a bit towards 60 and/or adjust angle

CROWN

A	49.70°	120-017-034-051-069-086-103	Even girdle
B	36.20°	002-015-019-032-036-049-071-084-088-101-105-118	Meet P A
Ba	36.11°	053-067	Cheat a bit towards 60 and/or adjust angle
C	30.00°	008-009-025-026-042-043-077-078-094-095-111-112	Meet P A B
Ca	29.71°	059-061	Cheat a bit towards 60 and/or adjust angle
T	0.00°	Table	

With a wee tweeking of main angles (+/- 0.2 degrees) ISO-brightness will vary from 86 to 91 %. Not bad at all. The general raytraced look is of an OMF-cut heptagonal star, hence the name. This cut ai'nt original, but with a little cheating around index 60 it comes very close to a regular heptagon.
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