Column group headers (each: PPT | r s t A 4A 8A ƒ):

Trunk | 1st Tertiary Branch | 2nd Tertiary Branches | 3rd Tertiary Branches

Top-left equations:

$c - b = s$

$c - a = t$

$b - a = f = t - s$

$f + (c - b) = t - s + s = t$

$f + s = t$

Relational column labels:

$f = b-a = t-s$ $s = c-b$ $\Delta = f$ $t = c-a$

Trunk

PPT	r	s	t	A	4A	8A	ƒ
3-4-5	2	1	2	6	24	48	1

1st Tertiary Branch

PPT	r	s	t	A	4A	8A	ƒ
5-12-13	4	1	8	30	120	240	7
20-21-29	12	8	9	210	840	1680	1
8-15-17	6	2	9	60	240	480	7

1st Branch relations: 1 8 ; 8 9 1 ; 2 9

2nd Tertiary Branches

PPT	r	s	t	A	4A	8A	ƒ
7-24-25	6	1	18	84	336	672	17
48-55-73	30	18	25	1320	5280	10560	7
28-45-53	20	8	25	630	2520	5040	17
36-77-85	28	8	49	1386	5544	11088	41
119-120-169	70	49	50	7140	28560	57120	1
39-80-89	30	9	50	1560	6240	12480	41
33-56-65	24	9	32	924	3696	7392	23
65-72-97	40	25	32	2340	9360	18720	7
12-35-37	10	2	25	210	840	1680	23

2nd Branch relations (s / t / Δ): 1 18 ; 18 25 7 ; 8 25 ; 8 49 ; 49 50 1 ; 9 50 ; 9 32 ; 25 32 7 ; 2 25

3rd Tertiary Branches

PPT	r	s	t	A	4A	8A	ƒ	s=c-b	t=c-a	Δ=f
9-40-41	8	1	32	180	720	1440	31	1	32	
88-105-137	56	32	49	4620	18480	36960	17	32	49	17
60-91-109	42	18	49	2730	10920	21840	31	18	49	
84-187-205	66	18	121	7,854	31,416	62,832	103	18	121	
297-304-425	176	121	128	45144	180576	361152	7	121	128	7
105-208-233	80	25	128	10920	43680	87360	103	25	128	
95-168-193	70	25	98	7980	31920	63840	73	25	98	
207-224-305	126	81	98	23184	92736	185472	17	81	98	17
44-117-125	36	8	81	2574	10296	20592	73	8	81	
52-165-173	44	8	121	4,290	17,160	34,320	113	8	121	
319-360-481	198	121	162	57,420	229,680	459,360	41	121	162	41
175-288-337	126	49	162	25,200	100,800	201,600	113	49	162	
217-456-505	168	49	288	49,476	197,904	395,808	239	49	288	
696-697-985	408	288	289	242556	970224	1940448	1	288	289	1
220-459-509	170	50	289	50,490	201,960	403,920	239	50	289	
180-299-349	130	50	169	26,910	107,640	215,280	119	50	169	
336-377-505	208	128	169	63,336	253,344	506,688	41	128	169	41
57-176-185	48	9	128	5016	20,064	40,128	119	9	128	
51-140-149	8	9	98	3,570	14,280	28,560	89	9	98	
252-275-373	154	98	121	34,650	138,600	277,200	23	98	121	23
120-209-241	88	32	121	12,540	50,160	100,320	89	32	121	
136-273-305	104	32	169	18,564	74,256	148,512	137	32	169	
396-403-565	234	162	169	79,794	319,176	638,352	7	162	169	7
115-252-277	90	25	162	14,490	57,960	115,920	137	25	162	
85-132-157	60	25	72	5,610	22,440	44,880	47	25	72	
133-156-205	84	49	72	8,814	35,256	70,512	23	49	72	23
16-63-65	14	2	49	504	2,016	4,032	47	2	49	

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r-PATTERNs: (r-middle) - (r-upper) - (r-lower) = r previous for ALL UPPER, MIDDLE & LOWER Branches and, for any given MIDDLE Branch, its own s=UPPER t and t=LOWER t

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Using the 5 simple equations from the top-left, all derived from **$a = r + s$, $b = r + t$,** and **$c = r + s + t$,** one can follow the **ƒ, s, t** and change **(Δ)** in **ƒ** values **to see the LARGER PATTERN.** We start with th**e 1st Tertiary Branch: see how the Δ ƒ between the BLUE equals 1 in the MIDDLE RED.** The **2nd** & **3rd Tertiary Branches** follow**.** The **2nd Branches** follow a **Δ ƒ** of **7:1:7,** while the **3rd** follows a **Δ ƒ** of **17:7:17−:−41:1:41−:−23:7:23. See how the MIDDLE ƒ remains constant through out each Tertiary Branch. The "s" symmetry is fundamental!**

Table 2f -10 **Tertiary Tree of Primitive Pythagorean Triples**