

Table 7: s=18

Table 7: Primitive Pythagorean Triples (PPT) with s=18													
•	• PPT	r	r <sup>2</sup> /2	s	t	s+t	(s+t) <sup>2</sup>	(s <sup>2</sup> + t <sup>2</sup> )	U/c	*next c	*next p	*next t	
						√W	W	U					c
•	7-24-25	6	18	1	18	19	361	325	25	13	109	25	49
	16-30-34	12	72	4	18	22	484	340	34	10			
	27-36-45	18	162	9	18	27	729	405	45	9			
	40-42-58	24	288	16	18	34	1156	580	58	10			
•	48-55-73	30	450	18	25	43	1849	949	73	13	205	73	121
	54-72-90	36	648	18	36	54	2916	1620	90	18			
•	60-91-109	42	882	18	49	67	4489	2725	109	25	265	109	169
	66-112-130	48	1152	18	64	82	6724	4420	130	34			
	72-135-153	54	1458	18	81	99	9801	6885	153	45			
	78-160-178	60	1800	18	100	118	13924	10324	178	58			
•	84-187-205	66	2178	18	121	139	19321	14965	205	73	409	205	289
	90-216-234	72	2592	18	144	162	26244	21060	234	90			
•	96-247-265	78	3042	18	169	187	34969	28885	265	109	493	265	361
Δ	a=Δ6 or 6X [a (all)=Δ6] b (all)=c (all) =ΔX <sub>n</sub>	Δ6 or 6X [a (all)=Δ6]	18X <sub>n</sub> <sup>2</sup>		X <sub>n</sub> (all)	ΔX <sub>n</sub> (all)			ΔX <sub>n</sub> (all)	ΔX <sub>n</sub> (all)	ΔX <sub>n</sub> (all)	ΔX <sub>n</sub> (all)	(X <sub>n</sub> ) <sup>2</sup> (all)
	n=17,19,21,...		n=4,5,6...		n=5,6,7,...	n=11,13,15, ...			n=17,19,21, ...	n=5,7,9,...	n=29,31,33, ...	n=17,19,21, ...	n=11,12,13 ...
Δ=difference				a <sub>p</sub> = previous		a= current		a <sub>n</sub> = next					
Summary — —>		<p>Every <b>s=18</b> PPT can be generated from the initial <b>3-4-5</b> PPT. Switching the “<b>s</b>” &amp; “<b>t</b>” pair-sets gives the <b>s=2,8,18,32,...</b> EVEN PPTs and from the <b>s=2</b>, the ODD <b>s=9,25,49,81,...</b> can be generated the same way. ALL PPTs are related back to the <b>3-4-5</b> PPT! Disregard the grayed out rows of <b>s=1,4,9,16</b> and all non-Primitive Pythagorean Triples (nPPT) except for the <b>r</b> and <b>r<sup>2</sup>/2</b> columns as they are shown to show how the specific <b>s=18</b> pattern is formed. Refer to <b>Table 3 (s=2)</b> to see how the <b>s=18</b> PPTs are a derivative. Notice that the spacing between subsequent PPTs now skips not to the next PPT but to the one thereafter, i.e. every other one. If “<b>c</b>”=73, it’s “<b>p</b>” value skips past the very next PPT to the one thereafter, e.i. to the “<b>c</b>”=205 row. This is a consistent pattern for all <b>s=18</b>. While <b>s=2</b> pointed to the next PPT row, <b>s=18</b> points to the second next row! As all subsequently larger <b>s-sets</b> will show, each has a similar skip pattern that is a consistent multiplier for that given <b>s-set</b>!</p> <p>Another key pattern is that the “<b>t</b>” values for all PPTs follow a the (1,4,9,16),<b>25,36,49,64,81,100,121,144,169</b>, (in <b>BOLD</b>) sequence — like that of the PD — skipping all those divisible by 4 or 9. An EVEN + ODD or ODD + EVEN pattern for “<b>a,b</b>” and “<b>a<sup>2</sup>,b<sup>2</sup></b>” and “<b>s,t</b>” values holds true. Patterns described typically begin with the first <b>s=9</b> PPT row. Some pattern values also run through the other nPPT and/or <b>s≠9</b> rows. Notice the <b>s=18</b> pattern for PPTs runs <b>1 (BLUE)-1-1 (BLUE)-1-1-1-1 (BLUE)-1-1 (BLUE)-1-1-1-1 (BLUE)-1-1,...</b></p> <p>Copyright©2014, Reginald Brooks, Brooks Design.</p>											