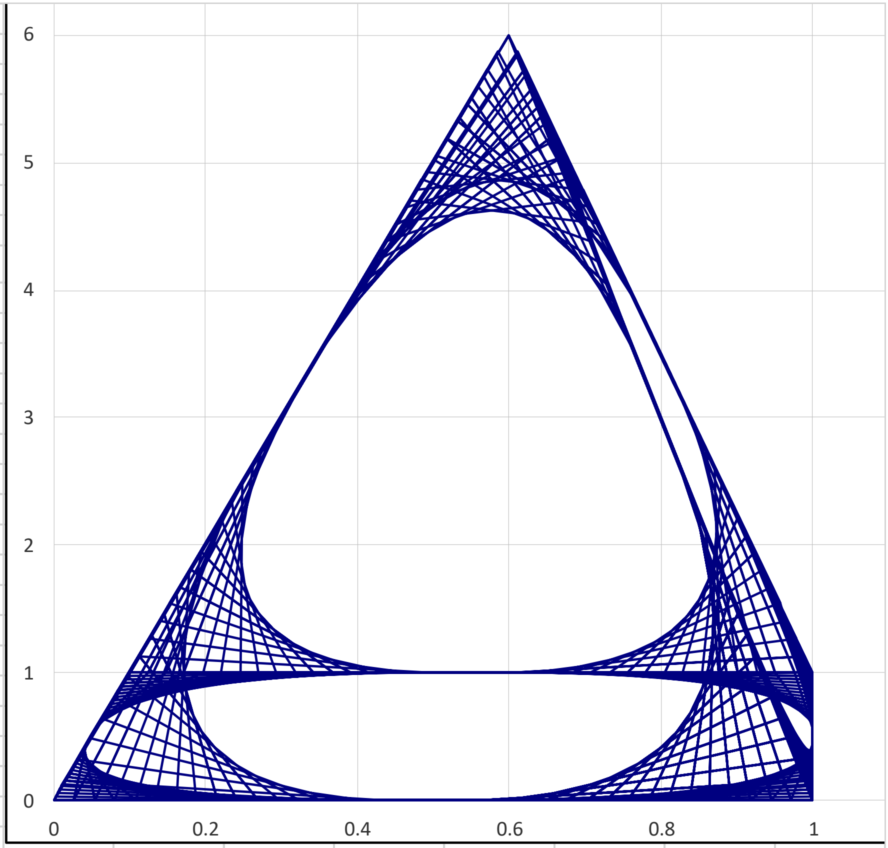
Linked Vertices

Vertices	X	Y	5
1	0	0	7
2	0.1	1	11
3	1	1	13
4	1	0	17
5	0.6	6	19
6	1	1	23
7	0.1	1	29
8	0.6	6	31
9	1	1	37
10	1	0	41
11	0	0	43
12	1	0	47
13	0.6	6	53
14	1	0	59
15	0	0	61
16	0.6	6	67
17	0.1	1	71
18	0	0	73
19	0.6	6	79
20	1	0	83
999			89
999 above means "vertex not used"			97



Above is a partial screenshot of sheet **5a** that was created to explore linked vertices. By appropriate choice of 20 (X, Y) vertices, the base and all sides have curves at connecting corners (Note: the left side is not visible in the image above).

The other important cells in that worksheet (not shown) are the highlighted X and Y values in cells V7:W7 (of 0.6 and 6) that control the location of the top vertex via links (=V7 and =W7) in the **purple highlighted cells** of the Vertices Table. If X or Y is changed, all 5 linked cells change. The other 15 vertices describe the base. (You could vary ***V*** to see how the VF was created but that is not the point here.) Sheet **5b** lets you to control all 4 vertices of a pyramid with triangular base.

Changing X. The bottom left image occurs if -0.2 is typed in V7. Now the peak is not over the footprint of the base.

Changing Y. The bottom right image occurs if 3 is typed in W7 (and V7 is 0.6). Now you can see the left side.

Questions to consider. How would you model flying in an airplane over this pyramid and looking down? Suppose you set Y = -3. Now which triangular face appears to be in front? Set (X, Y) = (-10, 3). Does the base still look like a base or is it now more of a side wall? Next try (10, 3) and ask the same questions. Finally, at (10, -3), which triangular face looks like it is in front?