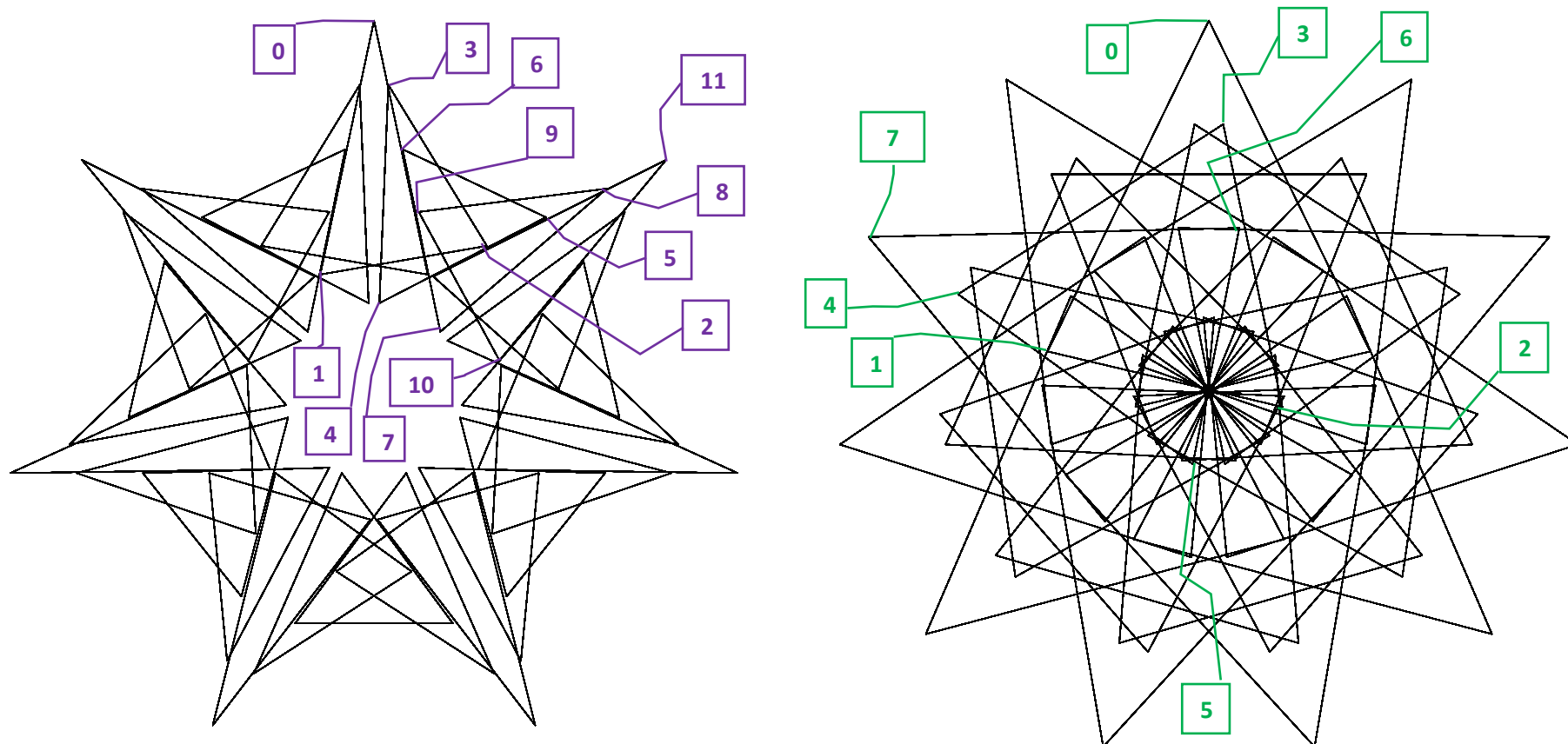


Shape-shifting Polygons: Comparing the first cycle from $n = 7$, $S = 11$ with $n = 11$, $S = 7$ for $P = (n*S+1)/3 = 26$; $J = (n-1)/2$.



The above images show the first S -length cycle (from polygonal vertex to polygonal vertex) for two images, both of which are created with 77 lines ($n*S = 77$). The left image has 7 cycles of 11 and the right image has 11 cycles of 7. All points in each first cycle are noted. Both images are shape-shifting triangles. The left is a *clockwise-one-time-around image* (first cycle ends at vertex 1). The right is a *counterclockwise-two-times-around image* (first cycle ends at vertex 9).

Each cycle has different numbers of “triangles” since $S = 4*3 - 1 = 11$ on left and $S = 2*3 + 1 = 7$ on the right. The left image has about 4 triangles and the right has about 2. To watch the shape-shifting triangles create each image, click *Toggle Drawing* after connecting to each link below:

The left image subdivision endpoints in the first cycle are successive points on three lines of the vertex frame. The points denoted 0, 3, 6, 9 are on the first vertex frame line from vertex 0 to 3. Points denoted 1, 4, 7, 10 are on the third vertex frame line from vertex 6 to 2. Points denoted 2, 5, 8, 11 are on the fifth vertex frame line from vertex 5 to 1. <https://www.playingwithpolygons.com?vertex=7&subdivisions=11&points=26&jumps=3>

The right image subdivision endpoints in the first cycle are successive points on three lines of the vertex frame. The points denoted 0, 3, 6 are on the first vertex frame line from vertex 0 to 5. Points denoted 1, 4, 7 are on the fourth vertex frame line from vertex 4 to 9. Points denoted 2, 5 are on the eighth vertex frame line from vertex 2 to 7. <https://www.playingwithpolygons.com?vertex=11&subdivisions=7&points=26&jumps=5>