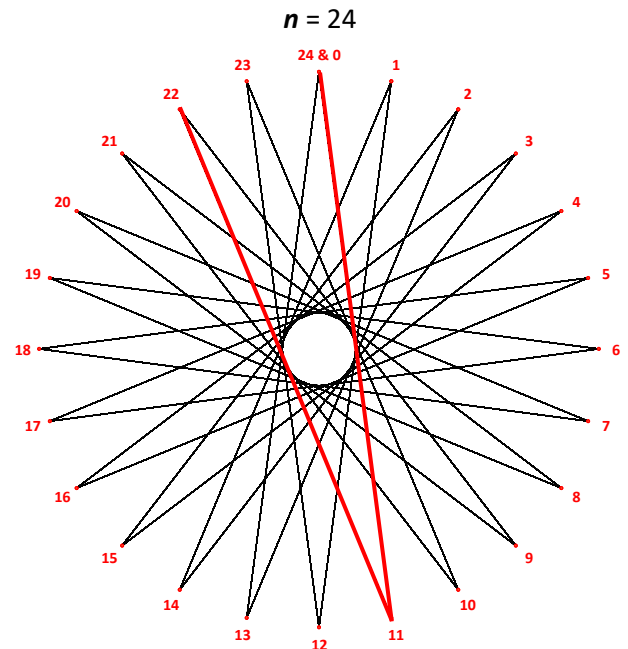
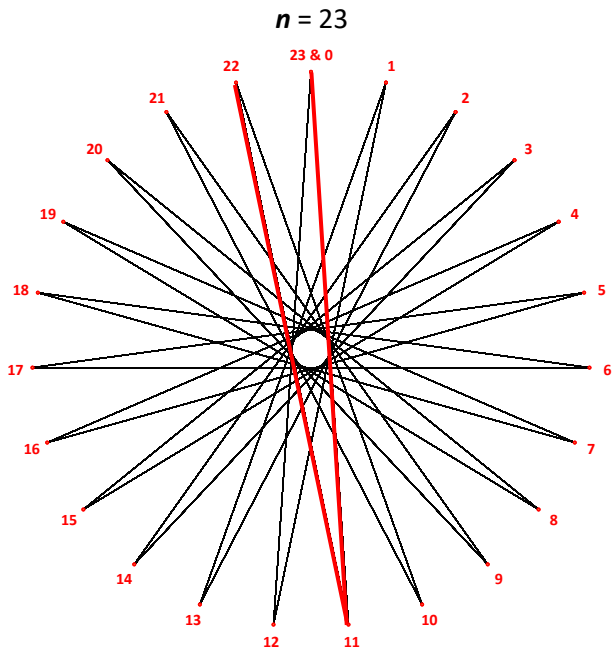
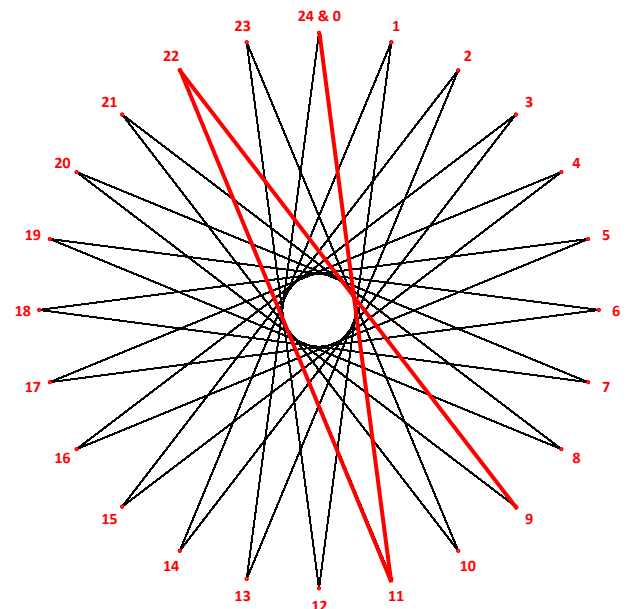
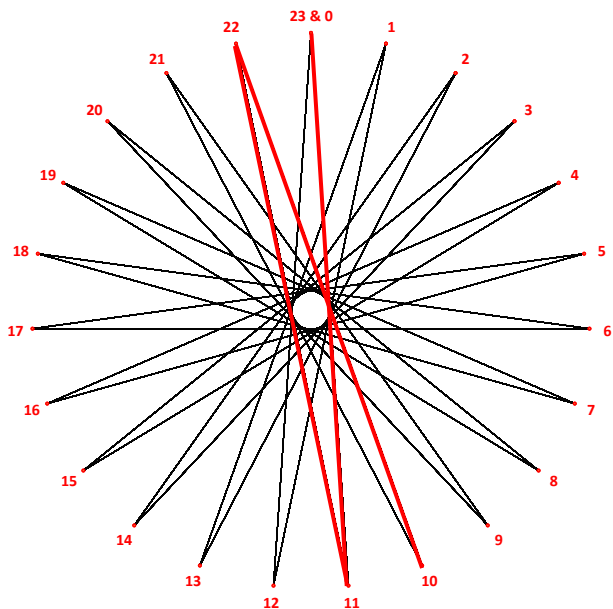


How Sharpest Stars are Drawn

We use the $n = 23, J = 11$ and $n = 24, J = 11$ sharpest stars to examine how the final image is constructed as a series of connected lines. The first line goes from 0 to 11 and the second from 11 to 22 in both images. These two jumps are highlighted with **red lines** over the lines in both images.



The third jump in each takes us from 22 to 33 vertices, but what does vertex 33 mean in each instance? The answer comes by subtracting n from 33 since we are now simply counting the SAME vertices a second time around. The third vertex endpoint is thus $10 = 33 - 23$ on the left and $9 = 33 - 24$ on the right.



Think of what is going on in each image. In both images, the used vertices are moving in a COUNTERCLOCKWISE direction (11 to 10 and 23 to 22 on the left, 11 to 9 and 24 to 22 on right). As additional segments are added, the same pattern will continue. The image is completed in half a rotation on the left but a full rotation on the right. To see this play out, click below, then click *Toggle Drawing*.

Left image: <https://www.playingwithpolygons.com?vertex=23&subdivisions=1&points=1&jumps=11>

Right image: <https://www.playingwithpolygons.com?vertex=24&subdivisions=1&points=1&jumps=11>

Want to have the rotation occur in a clockwise direction? Just change $J = 12$ in the left image and $J = 13$ in the right.