

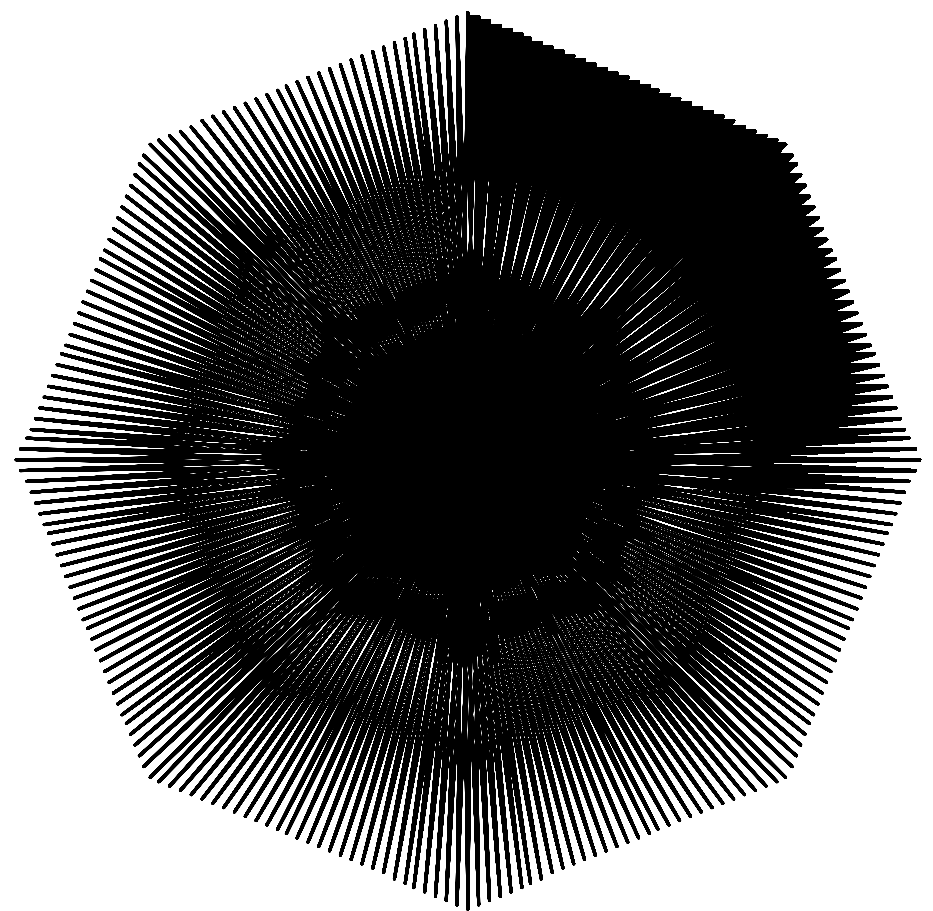
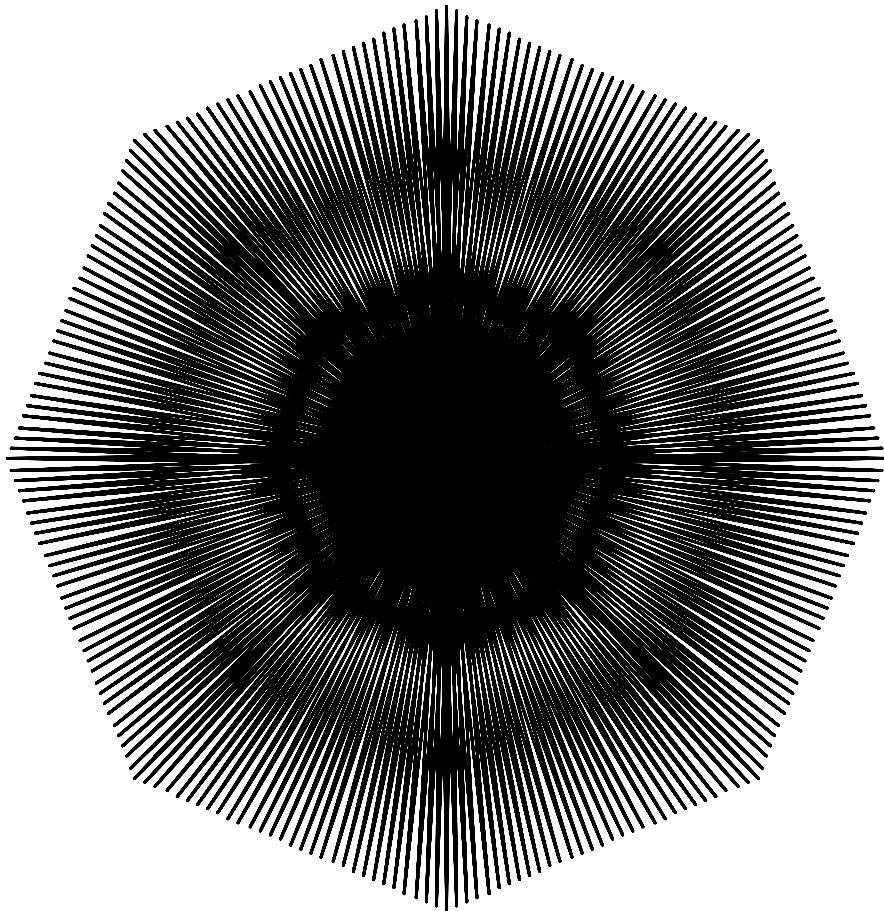
Both images have  $n = 8$  and  $S = 30$ . One is a single-jump the other a double-jump image

Q1: How do these images differ from one another and why? What are the jump patterns in each?

**Fact:** Both values of  $P$  are such that the image is a single line when  $P$  is one larger than this value.

Q2: What are the values of  $P$  in each instance?

Q3: What would each image look like if  $P_{new} = P + 2$  instead of  $P$ ?

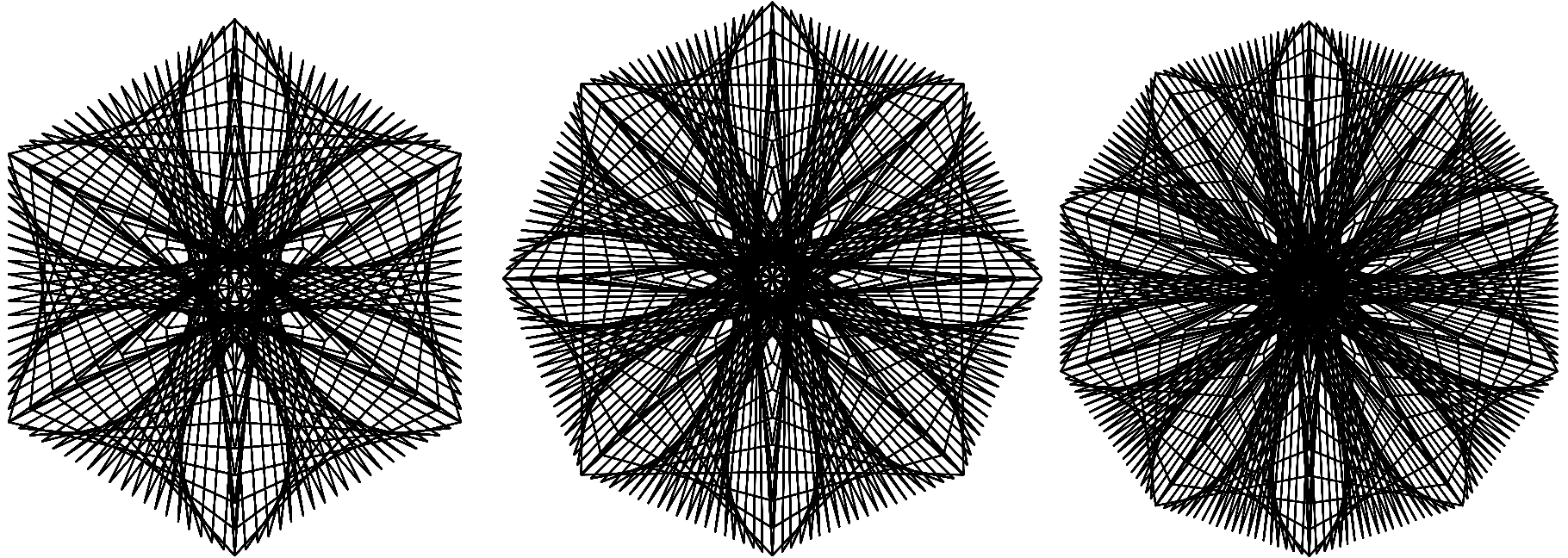


All three images have  $S = 20$ ,  $P = 23$ , and  $J_1 = 1$

Q1: What are the values of  $J_2$  and  $n$  for each image?

Q2: What is the degree of rotational symmetry in each panel?

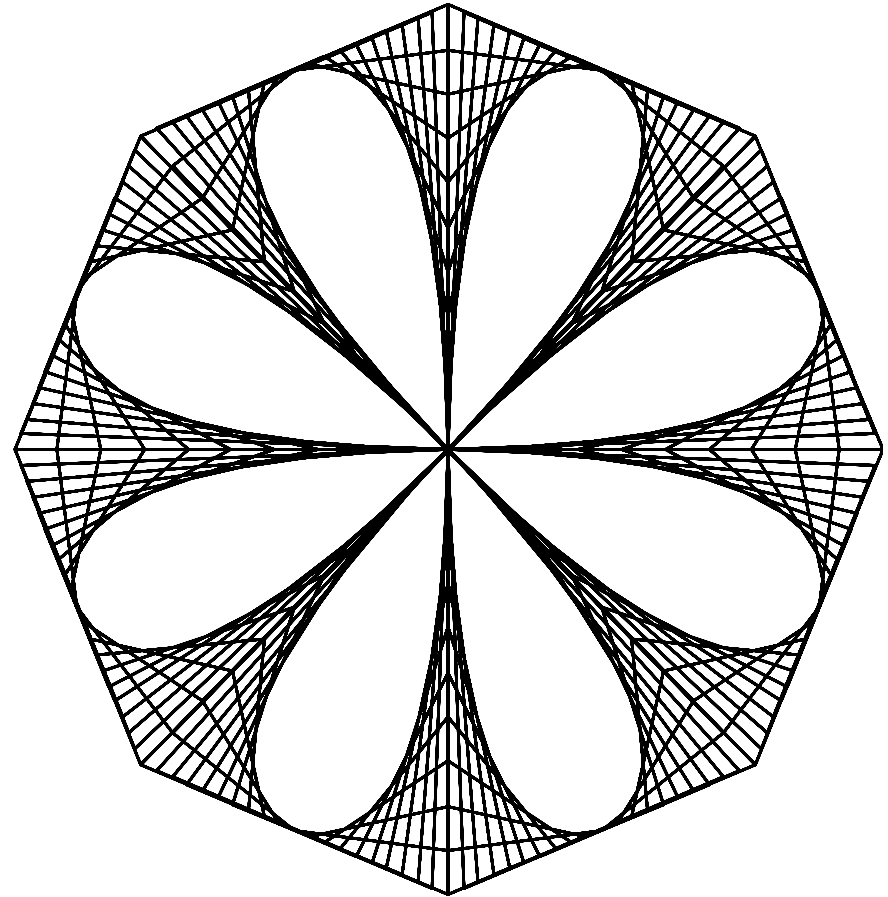
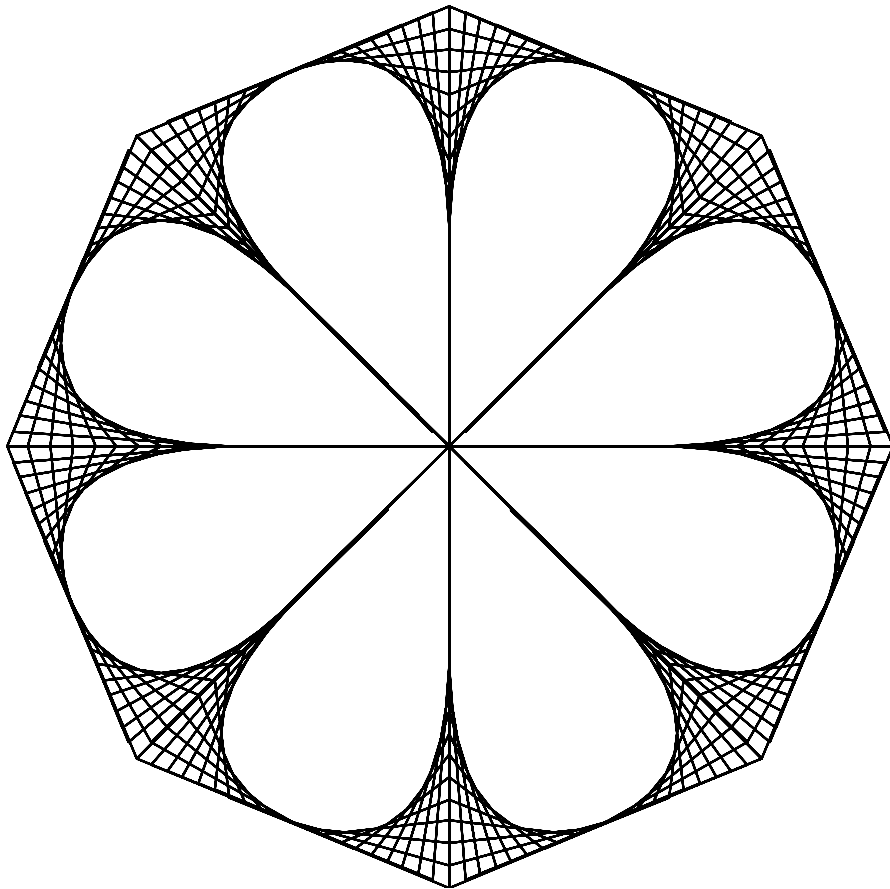
Q3: Which version of File 4 must have been used to create one or more of these models? Which one(s) and why?



Both images have  $n = 8$ ,  $S = 20$  and  $P = 11$ . One uses File 3, the other uses File 4.

Q1: Which image used File 3, and which used File 4? How do you know which is which?

Q2: What would you do to  $P$  in the left image to make it more like the right image?



Both images have  $n = 10$ , one has 390 lines, the other 400. One uses File 3, the other File 4.

Q1: Which image used File 3, and which used File 4? How do you know which is which?

Q2: What are  $J_1$  and  $J_2$  in the file 4 version of this 10-point flower?

Q3: Suppose  $VCF = 1$  and  $SCF = 1$ . What is  $S$  in each image? (Hint: You do not need to manually count segments along the vertex frame to answer this question.)

