**Fibonacci Magic Task Sheet**

The Fibonacci Sequence is a sequence that is defined recursively, where $F\_{n}=F\_{n-1}+F\_{n-2}$ and $F\_{1}=F\_{2}=1$. Thus, the Fibonacci Sequence for $n=1, 2, 3, …$ is 1, 1, 2, 3, 5, 8, 13, 21, 34, …

Use the following applet to visually represent the Fibonacci Sequence using squares and the Fibonacci spiral (golden spiral): <https://www.geogebra.org/m/KxDU4wsG>.

1. Come up with a conjecture about the area of the squares created by the applet.
2. Show your thinking behind your conjecture from the prompt above. This does not need to be a formal proof, just a written process of your thoughts on your conjecture.
3. Watch the following TED Talk from Arthur Benjamin and see if you came up with a conjecture that he mentioned in his video: <https://youtu.be/SjSHVDfXHQ4>.
4. What did you find the most interesting in the TED Talk?
5. How did Arthur Benjamin connect what you created in the applet to the Golden Ratio?