Fibonacci Sequence

0, 1, 1, 2, 3, 5, __, __, ___, ___

See if you can finish the sequence above.

Make a Fibonacci Square:

1) Draw a 1 x 1 square in the middle of the graph paper.
   Draw another one right next to it.

2) Now add a 2 x 2 square

3) Now add a 3 x 3 Square

4) Now add a 5 x 5 square!

5) Try drawing what's next, if you have room!

Using a Ruler:

1. First, draw two squares side by side. Use your ruler to make them 0.5 cm square.
2. Now make a 2 × 2 square on top of the first square. So if the first square was 0.5 cm, the 2 × 2 square would be 1 cm square, right?
3. Continue this pattern, making each square the next size in the Fibonacci sequence. So after the 2 × 2 square, you would make a 3 × 3 square (1.5 cm × 1.5 cm), then a 5 × 5 (2.5 cm × 2.5 cm), and so on. This is just like what you did with the graph paper, only using a ruler. Keep going until you have made a square that is 21 × 21 (10.5 cm × 10.5 cm).
4. Each square will have an edge that is the sum of the two squares before it, just like in the Fibonacci sequence.

Now, with your compass, make an arc in the squares with a radius the size of the edge of the square. Don't get nervous about these big words; they just mean that the arc will be one-quarter of a circle. The arcs in the first squares will be really, really tiny. But look how they grow!