Fibonacci Circle Art

HOW TO MAKE A CIRCLE USING A COMPASS

A compass has a built-in measuring tool. This compass is ready to draw a 1" radius circle.

WHAT YOU’LL NEED:
- Compass
- Ruler
- Construction Paper
- Scissors
- Glue Stick

WHAT’S A FIBONACCI SEQUENCE?
A Fibonacci Sequence refers to a sequence of numbers in which each term is the sum of the two preceding terms. The standard Fibonacci sequence looks like this:

1, 1, 2, 3, 5, 8, 13, 21, 34, 55, etc.

We can visualize how to find these numbers with addition:

\[
\begin{align*}
(0) + 1 &= 1 & 1 + 1 &= 2 & 1 + 2 &= 3 & 2 + 3 &= 5 & 3 + 5 &= 8 & 5 + 8 &= 13
\end{align*}
\]

These Fibonacci numbers appear in the proportions of many natural things including pineapples, pinecones, sunflower seeds, and snail shells! The ratio created by these numbers is particularly pleasing to our eyes and forms the basis for the “The Golden Ratio” in art.

In this project, each circle you cut corresponds to a number in the Fibonacci sequence. Have fun trying out different ways to make an attractive pattern!

Once you’ve got the right measurement, place the compass on the paper. Gently rotate the pencil around the metal point to draw a circle. Do your best to keep the metal point in place the whole time!

Carefully cut out the circle with a pair of scissors after you finish drawing. Scrap paper can be saved to use later.
USE YOUR SKILLS TO MAKE FIBONACCI CIRCLE ART

1. Using a compass and various paper colors, draw and cut six circles:
   • Two $\frac{1}{2}$" radius circles
   • One 1" radius circle
   • One 1½" radius circle
   • One 2½" radius circle
   • One 4" radius circle

2. Get creative! Arrange the six circles on another piece of construction paper in different ways!

3. When you find a configuration you like, glue your circle art to the construction paper. Start with the circle at the bottom of your design and work up.