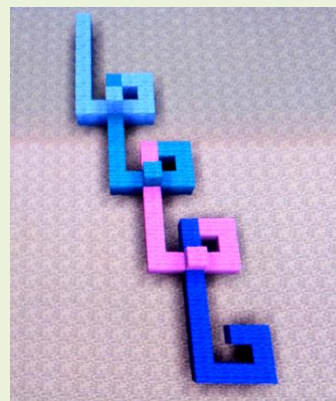


Design by Formula – Spirolaterals

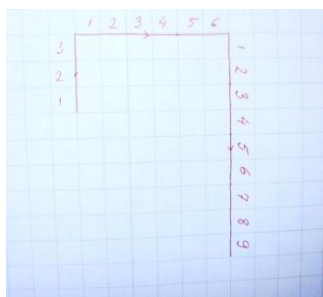
Why See the shape of each skip-pattern at a glance, and explore factorization.

How Choose a part of the skip-count sequence. Make a line as long as the first number, turn right, make a line as long as the second number, turn right, and so on.

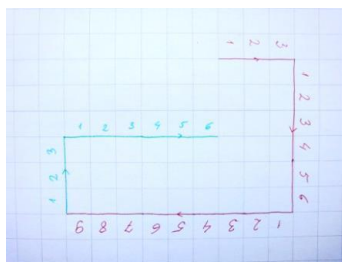
What Make artistic, geometric diagrams based on skip-counting formulas.



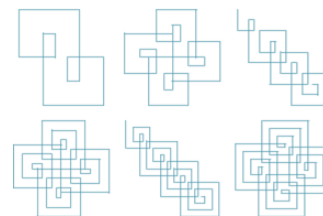
1



2



3



Choose a part of a skip-counting sequence (3, 6, and 9). Draw a 3-unit line. Turn right and draw a 6-unit line. Turn right again and draw a 9-unit line.

Turn right and draw another 3-unit line, then 6-unit, etc.

Keep going for a while. What do you notice about your shape?

Explorations

Do different numbers always give you different spirolaterals?

Work backwards: draw a spirolateral first, and then figure out which formula goes with it.

What do you notice about your path? What if we turn left rather than right?

Try to build in virtual worlds like Minecraft, or program in modeling software such as GeoGebra or Scratch.

Take this activity outside, where you can draw giant spirolaterals with chalk, or use sticks.

Math is what you make of it!

**Make Up
Your Own
Spirolateral Models of Multiplication**

Email your ideas and pictures to reach.out@naturalmath.com

An activity from the upcoming “Multiplication Explorers” book by NaturalMath.com

