40 Weeks of Math Challenges

Week 23

These visual math challenges have been created to intrigue and inspire your children. They are designed to be hands on, open-ended inquiries, to challenge them to think deeply about the world around them.

Each week a new set will be released with four levels.

- Preschool
- Years 1/2 (approx. age 6-8)
- Year 3/4 (approx ages 8-10)
- Year 5/6 (approx. ages 10-12)

I hope you enjoy exploring the ideas with your children! The challenges don't require any special resources, however your children will need a 'Math Journal' to record their discoveries. Any notebook will work, but if you can, try to encourage them to use a Grid book.

Find me on Instagram @jo_mathinnature and Nature Study Australia

Fibonacci image from public domain images https://commons.wikimedia.org/wiki/File:Greatest_Italian_people.png

Fibonacci

An Italian mathematician, he is considered the greatest western mathematician of the Middle Age (1170-1245AD)

1. Fibonacci is famous for explaining the sequence that causes spirals we see in nature. Like what we see in a snail shell or pine cone.

2. Do you have sea shells? Take a close look at the spirals. Sort out your shell into a pile that has spirals and a pile that doesn't. If you don't have any real shells you can use pictures to make cards to sort.

Fibonacci

An Italian mathematician, he is considered the greatest western mathematician of the Middle Age (1170-1245AD)

1. Fibonacci introduced the Indian numeral system to the west. People were still using Roman numerals so, Fibonacci wrote a book to show how the 10 digit system worked.

2. The decimal system has the digits 0,1,2,3,4,5,6,7,8,9 they are given values by their place in a number.

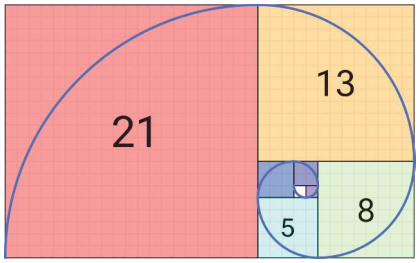
3. Use a pack uno cards to make numbers. Turn the pack over. Draw three cards. What is the biggest number you can make with these cards? The smallest?

4. Play with a friend. See who can make the biggest number with their cards.

Fibonacci

An Italian mathematician, he is considered the greatest western mathematician of the Middle Age (1170-1245AD)

1. The Fibonacci sequence is 1,1,2,3,5,8,13,21,34,55
2. Each number is the sum of the previous two. 1+1=2, 1+2=3, 2+3=5, 3+5=8 and so on. It looks like this when you draw it



draw one in your math book!

Fibonacci

An Italian mathematician, he is considered the greatest western mathematician of the Middle Age (1170-1245AD)

1. You may know that Fibonacci is famous for the golden spiral sequence but did you know he also did amazing work with square numbers.
2. Square numbers are numbers multiplied by themselves. 2x2=4 or 2^2 Square numbers make a square array.
3. Create square arrays in your math journal and show the square number they represent.

$3^2 = 9$

Challenge 23 - Spiral Shell Sorting Cards