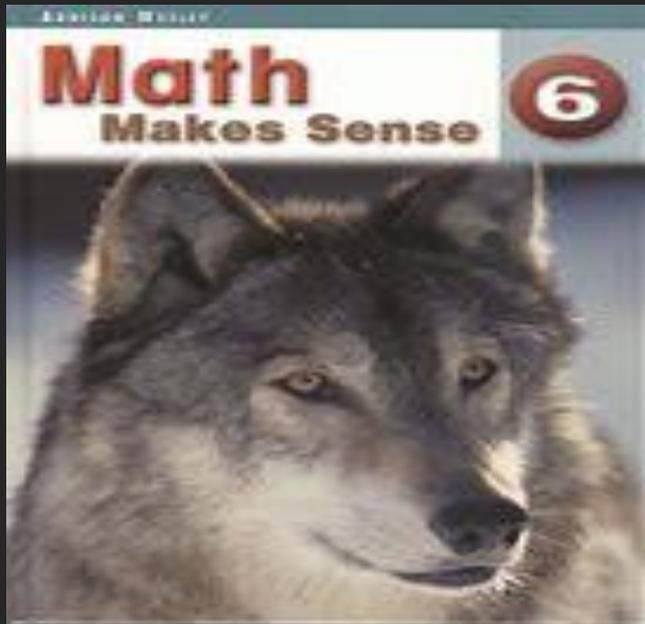


Hello , we have some math facts who are quite interesting for you ! The presentation contains informations about Fibonacci's sequence , Golden Ratio , how to cleverly cut a pie , favorite numbers , perfect squares and centered hexagons , multiplication of numbers and the area of "Pizza".

Enjoy !

DENIS ROI & FAUR
NOAM

Math Curiosities



Interesting facts :

- Mathematics is the only universal language
- In the world of humans , just like in mathematics there are irrational numbers , perfect squared numbers and complex numbers. Further, as in philosophy, there are transcendental numbers in mathematics and, like art , mathematics also has its imaginary and surreal numbers.

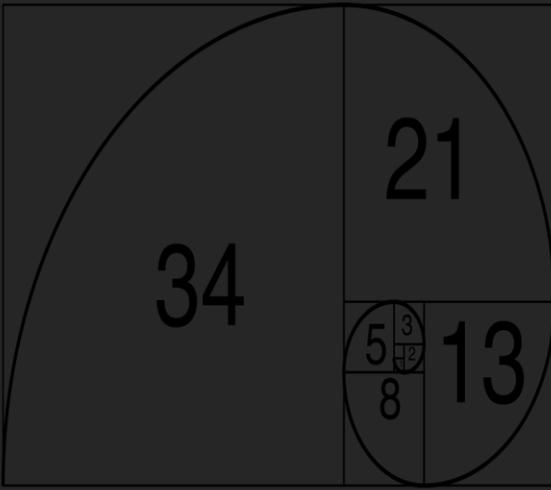
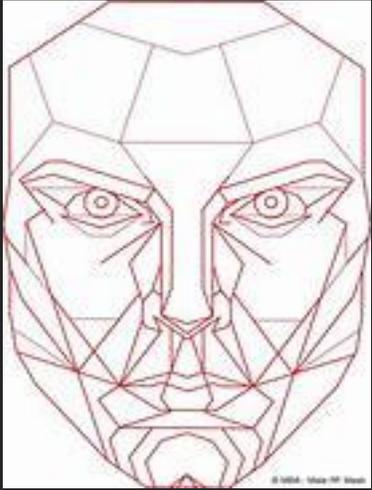


Fibonacci's sequence of numbers , where every number is made from his precedent 2 numbers , $0+0=0$, $0+1=1$...1,2,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946 and so on .



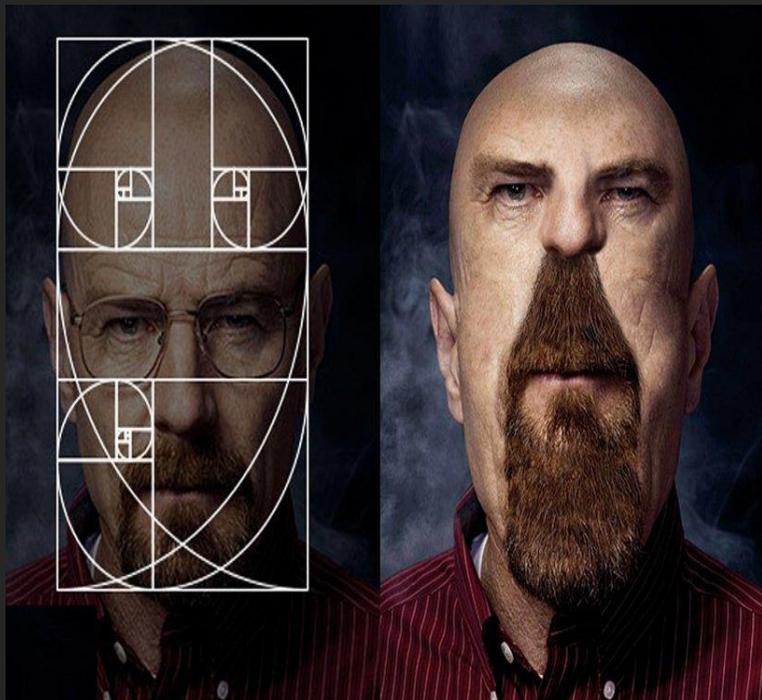
*sunflowers respect this pattern. There are 2 ways the seeds go , and everytime the number of seed rows belong to Fibonacci's sequence

(clockwise =21 or 34 /counterclockwise =34 or 55)



-The spiral is known as a mathematical symmetry algorithm that underlies our perception of attractiveness. Studies of the most beautiful women in the world have shown that they have countless instances of this ratio in their faces.

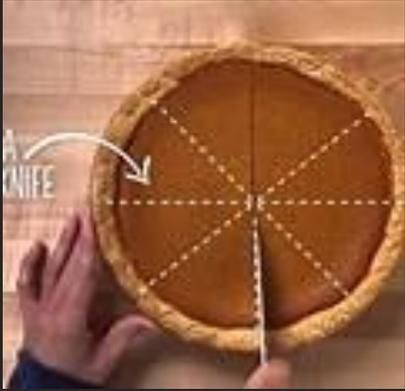
-The scheme "describes" the most perfect & symmetrical face



-Kim Kardashian

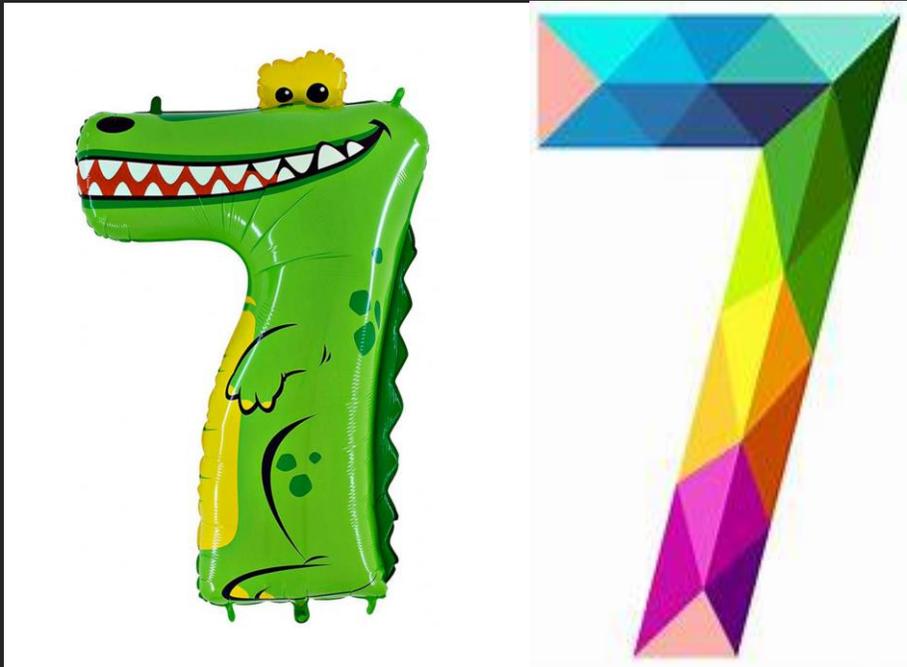
HoYeon Jung-
(doesn't meet the Golden Ratio requirements but it's really beautiful シ)





We shall start with the actual fun facts :

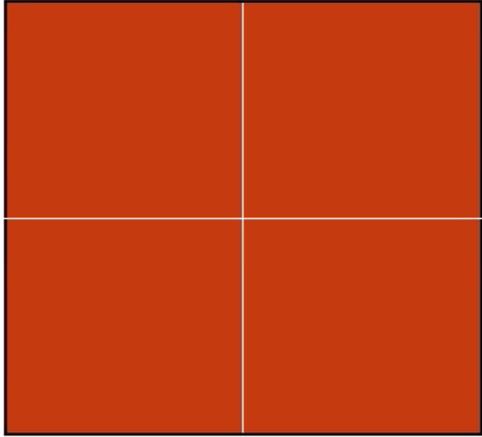
-You can cut a pie in 8 pieces by only slicing it 3 times!



-The most popular favorite & lucky number is 7

Every 1 in 10 people have 7 as their favorite number , next comes number 3 with about 1 in 15

4



1



-Perfect Squares

-These numbers can be arranged to look like squares:
4,9,16

The enemy of a perfect square is a *square-free* number: one who is divisible by no perfect squares.

1, 2, 3, 5, 6, 7, 10, 11, 13...

Note that 8 doesn't make the cut since it's divisible by 4, 9 is divisible by 9, and 12 is divisible by 4.

-Centered Hexagonal Numbers

-These numbers can be arranged into a hexagon, starting with one point in the middle:

1, 7, 19, 37



```
1 x 1 = 1
11 x 11 = 121
111 x 111 = 12321
1111 x 1111 = 1234321
11111 x 11111 = 123454321
111111 x 111111 = 12345654321
1111111 x 1111111 = 1234567654321
11111111 x 11111111 = 123456787654321
111111111 x 111111111 = 12345678987654321
```



So, if you calculate 1×1 , we get 1. Ok, that's a bit of a lazy palindrome, let's move on :

$$11 \times 11 = 121,$$

$$111 \times 111 = 12321,$$

$$1111 \times 1111 = 1234321,$$

and keep going. If you multiply

$$111111111 \times 111111111 \text{ you get } 12345678987654321.$$

If you use the seed "12345678987654321" in minecraft you'll be spawned right next to a pizza (has pineapple on it)

-In Thailand , "555" is used as "hahaha"



-A pizza that has the radius of "z" and the height of "a" has the volume of $V = \pi \times z \times z \times a$



$$V = \pi z^2 a$$

$$V = \pi (z * z) a$$



Thank you
for your
attention!!