



Semaine des maths

Séance : « autour du nombre pi »

1/ Ecoute à l'aveugle de la chanson de Kate Bush «Pi».

<https://www.youtube.com/watch?v=kZSHr5E7fZY>

2/ Questionnement en anglais.

What can you hear? Any repetitions? What is this song about?

3/ Distribution et lecture des paroles de la chanson

Sweet and gentle sensitive man
With an obsessive nature and deep
fascination
For numbers
And a complete infatuation with the
calculation
Of PI

Oh he loves, he loves, he loves
He does love his numbers
And they run, they run, they run him
In a great big circle
In a circle of infinity

3.1415926535 897932
3846 264 338 3279

Oh he loves, he loves, he loves
He does love his numbers
And they run, they run, they run him
In a great big circle
In a circle of infinity
But he must, he must, he must
Put a number to it

50288419 716939937510
582319749 44 59230781
6406286208 821 4808651 32

Oh he loves, he loves, he loves
He does love his numbers
And they run, they run, they run him
In a great big circle
In a circle of infinity

3/ Questions orales en anglais

***Do you know this number?**

***What is it used for?**

***This song is about a “Pi lover”. What do you think “pi lovers” do?**

On October 16th, 2011, the Japanese Alexanders J. Yee and Shigeru Kondo calculated exactly 10 000 000 000 050 (10 000 billions) decimals of the number pi, after 371 workdays. It is a record.

Some « pi lovers » memorized over 70,000 digits of Pi!

***All around the world, mathematicians celebrate «pi day» on March 14th. Why?**

In English 3.14 means the fourteenth day of the third month of the year

***When was the best Pi day moment ?**

3/14/1592 at 6.53:58 (Galileo and Shakespeare were alive!)

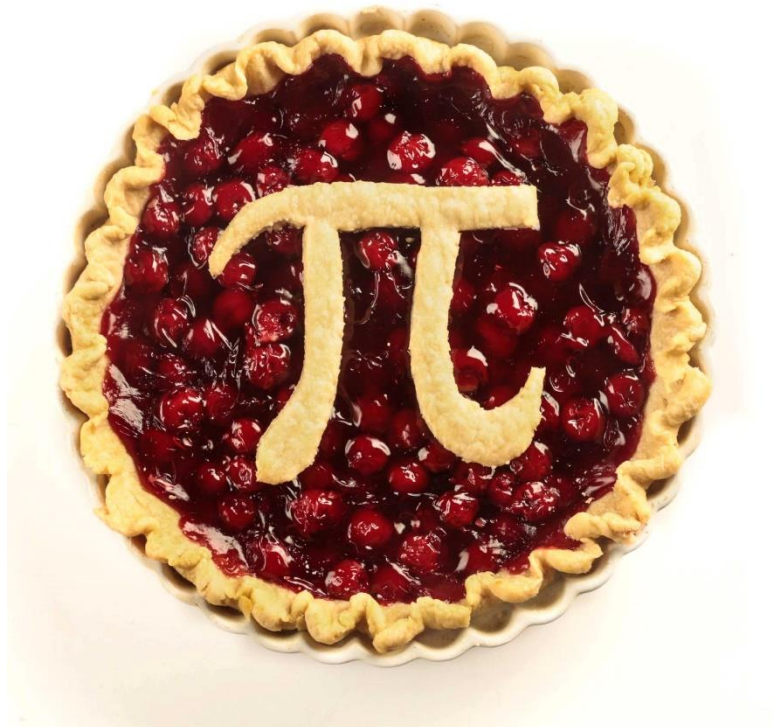
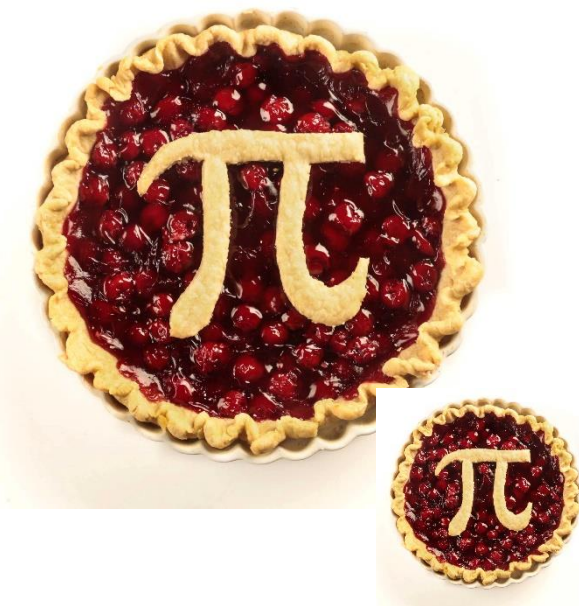
***What do you think “Pi lovers” eat on 3.14 to celebrate their favorite number? A Pi pie of course !**

5/ Activity : « The Pi pie »

Explore how you can find the number « pi » in these pies.

You can use a string, a ruler and a calculator

Just notice that the answer « I know! it's written on the pie » is not the right one!



6/ Curiosity « the Pilish »

Pilish is a dialect of English in which the numbers of letters in successive words follow the digits of Pi.

A poem written so that the length of each word is determined by the digits in pi is called a **piem**.

A haiku written under those constraints is called a **piku**.

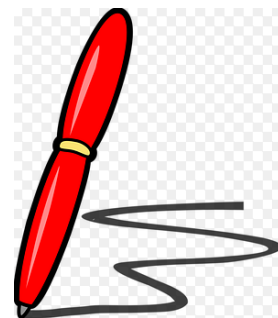
Here's an example from "Not A Wake," by Mike Keith, the first book ever written completely in **Pilish**. (Mike Keith is an American mathematician born in 1955)

*Now I fall, a tired suburban in liquid under the trees,
Drifting alongside forests simmering red in the twilight over Europe.*

Now has 3 letters, *I* has 1 letter, *fall* has 4 letters, *a* has 1 letter, and so on, and so forth.

It's your turn to write a text, a poem or a haiku in Pilish !

Have fun !



7/Prolongement à la maison :

Cook and decorate a «Pi pie ». Examples:

