

## What is the meaning of Greek pi?

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Let's do as Archimedes did in his time !! He drew a circumference and then drew the inscribed and circumscribed circumference. Once he had found the perimeter of the 2 polygons, completed the following table.

Note that on **d=diameter length** you have to write **=sqrt (22,6^2+32^2)**

| n of sides | a = perimeter of inscribed poli | b= perimeter of circumscribed poli | d= diameter length | a/d   | b/d | Names of students/ country/ Teacher |
|------------|---------------------------------|------------------------------------|--------------------|-------|-----|-------------------------------------|
| 4          | 22,6                            | 32                                 | 8                  | 2,825 | 4   |                                     |
| 5          |                                 |                                    |                    |       |     |                                     |
| 6          |                                 |                                    |                    |       |     |                                     |
| 10         |                                 |                                    |                    |       |     |                                     |
| 12         |                                 |                                    |                    |       |     |                                     |
| 16         |                                 |                                    |                    |       |     |                                     |
| 20         |                                 |                                    |                    |       |     |                                     |
| 30         |                                 |                                    |                    |       |     |                                     |

If we could continue with a big number of sides, lets say 100 we would find that the two division get closer and closer to 3,14 which is the value of Pi!!

That's the meaning of Pi, **representing the ratio between the circumference and its diameter!!**

Check this in reality by measuring the circumference and diameter of a round object, like a coin or a bottle lid. Divide the circumference by the diameter, and you'll see that the result is very close to 3.14, demonstrating the concept of Pi in the real world!

## Fun fact!

Actually, Pi has an infinite number of decimal figures. The first two are 14 but then it goes on without any regularity. Here are listed, every line shows 50 decimal figures of Pi

3,

14159265358979323846264338327950288419716939937510  
58209749445923078164062862089986280348253421170679  
82148086513282306647093844609550582231725359408128  
48111745028410270193852110555964462294895493038196  
44288109756659334461284756482337867831652712019091  
45648566923460348610454326648213393607260249141273  
72458700660631558817488152092096282925409171536436  
78925903600113305305488204665213841469519415116094  
33057270365759591953092186117381932611793105118548  
07446237996274956735188575272489122793818301194912  
98336733624406566430860213949463952247371907021798  
60943702770539217176293176752384674818467669405132  
00056812714526356082778577134275778960917363717872

Your teacher can tell you that  $2\pi$  represents an angle of 360 degrees, which is the angle of the circumference. Find the 358<sup>th</sup>, 359<sup>th</sup> and the 360<sup>th</sup> figure, what number do we find?

This fact was firstly noticed by Albert Einstein, whose birthday is March the 14<sup>th</sup>, pretty wired, isn't it?? 😊