

Lesson on PI

GO TO <http://www.geocities.com/SiliconValley/Pines/5945/>

**Steps:**

Click to close any windows that appear on your page.

Scroll down and click on 1,000,000 digits of PI.

**SCROLL DOWN** and you will see them!!!!

1) What kind of number is PI? Is it rational or irrational? \_\_\_\_\_

2) An irrational number is a non-terminating (non-ending) and non-repeating decimal. Go back and see if you see PI repeating? Does PI repeat? \_\_\_\_\_

Another definition for an irrational number is a number that CANNOT be written as a common fraction (with one numerator and one denominator).

Remember PI IS NOT  $22/7$ .

3) Write the first 10 decimal places of PI here **3.**\_\_\_\_\_

**Click on the Latest News About PI**

4) How many digits of PI have been calculated? \_\_\_\_\_. How was this done? \_\_\_\_\_

**Go Back and click on History of PI. Read this section carefully.**

5) What decimal did the Egyptians use for PI? \_\_\_\_\_

6) Who was Archimedes? \_\_\_\_\_  
\_\_\_\_\_

7) What method did Archimedes use to find PI? \_\_\_\_\_  
\_\_\_\_\_

8) Who was the first person to call this number by the Greek letter PI? \_\_\_\_\_  
\_\_\_\_\_

9) How do we get PI if we know the circumference of a circle and its diameter? \_\_\_\_\_  
\_\_\_\_\_

**Read the rest of that section (scroll down) and GO BACK to the main page.**

**Click on Interesting and Fun Facts about PI**

10) There are 71 interesting facts about PI. Can you list five of them?

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Here's a Pi limerick:

Three point one four one five nine two  
Its been around forever - its not new  
It appears everywhere In here and in there  
Its irrational I know but its true !

Ask your English teacher what a limerick is. Better yet, can you memorize the above limerick?

**Go Back to the Main Page and click on Pi Charts**

**Take a look at the number of decimal places that have been calculated through out time. SCROLL WAY DOWN SO YOU CAN SEE HOW LONG IT HAS TAKEN TO CALCULATE PI OVER TIME.**

11) How long did William Shanks take in 1807 to calculate 707 digits by hand?  
\_\_\_\_\_years. That's \_\_\_\_\_ per digit.

12) How about Y. Kanada in 1988 with his Hitachi S 820? \_\_\_\_\_to find  
\_\_\_\_\_digits. That's \_\_\_\_\_per digit.

**GO BACK NOW and click on either Pi Songs and Jokes.**

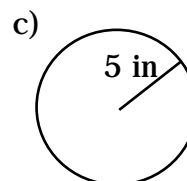
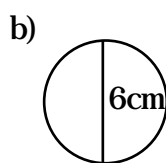
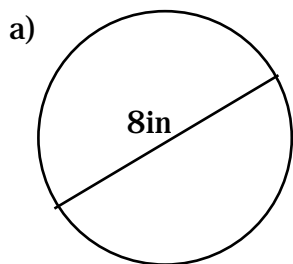
**Does your birthday appear in the digits of PI???? Let's find out!  
NOW GO TO <http://www.facade.com/legacy/amiinpi/>  
Write your birthday in digits and it will tell you in which decimal  
place your birth date appears! (follow instructions)**

Write your birthday here \_\_\_\_\_In what decimal place does your  
birthday appear? \_\_\_\_\_Write your friend's birthday here?  
In what decimal place does it appear? \_\_\_\_\_

1) Pi is \_\_\_\_\_ (rational or irrational) because \_\_\_\_\_

2) To find PI using the circumference of a circle and its diameter, you \_\_\_\_\_

3) Find the circumference of these circles.  $C = D$



use  $\pi = 3.14$

4) The circumference of a circle is 62.8. Use  $\pi = 3.14$  to find the diameter:

5) Did you know that in 1897, the State of Indiana passed a bill (Section I, House Bill No. 246, 1897 - House of Representatives) that  $\pi$  should be officially just 3, exactly 3.

Why do you think they did this? How would a decision like this affect our technology?

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(Question 5 adapted from the book Teaching Mathematics With The Internet by Marc Alan Rosner, El Segundo, Ca. Classroom Connect, Inc., 1998.)