

3.14 π Day Activities

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Maryland Mensa's Gifted Youth Program

For more information on Maryland Mensa's Gifted Youth Program and activities, please visit
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3.14 π Day Activities

π Day (March 14th or 3.14) is just around the corner, and whether you choose to do all of the below activities in one day, one activity a day for 3.14 days, or combine these activities with others you have planned, we hope that you'll enjoy celebrating the lovable and always irrational π !

Activity 1: Let's Make π

Pie Plate (per student)

Worksheet Printout (per student)

Scissors

Rulers (with different units of measurement)

String

This activity can be as simple or elaborate as you would like to make it! The goal is to provide students with a hands-on opportunity to explore π , while also providing a great opportunity to discuss the impact different units of measurement make on results. You can also expand the activity beyond pie plates to explore how the size of the circle being measured impacts the results. We turned our pie plates into take-home π Day mementos by putting " π Day," the year, the student's name, and their results from the activities on the plate. We also gave the student with the closest answer to π a prize, but that's entirely optional, of course!

Activity 2: π doku

Worksheet Printout (per student)

Answer key (one copy)

This activity will give students a great logic skills workout and help them memorize the first nine digits of π (which will come in handy for the next activity).

Activity 3: Let's Get Irrational!

Worksheet Printout (per student)

We recommend providing the printout in advance to give students plenty of time to learn π . This exercise is also a great opportunity to discuss memorization techniques. We provided a prize to the student that memorized the greatest number of digits, but allowed students to write out π , versus reciting it out loud, due to student comfort and time constraints.

Activity 3.14: π Decorating Contest

Worksheet Printout (per student)

Whether you treat this as an actual contest, or just a fun opportunity for artistically-inclined students to get in on the fun, there are no rules other than to think (and feel free to color) outside the box!

Let's Make π

For this activity we used pie plates, string, and rulers, but you can use any circular object (e.g., a plate or bowl). In fact, we recommend that you experiment with different measuring implements, units of measurement (e.g., inches versus millimeters), and using circular objects of varying sizes to see what the impacts are on the results!

STEP 1. MEASURE THE CIRCUMFERENCE

Measure the circumference (i.e., the distance around the edge) of the pie plate.

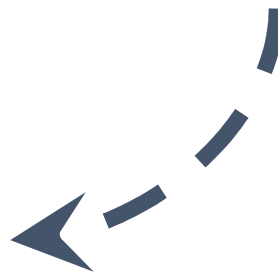
Circumference Measurement: _____



STEP 2. MEASURE THE DIAMETER

Measure the diameter of the pie plate (i.e., the distance across the pie plate).

Diameter Measurement: _____



STEP 3. CALCULATE PI!

Using the back of this sheet, divide your circumference measurement by your diameter measurement and see how close you come to Pi!

$\pi = 3.14159265358979323846264338327950288419716939937 \dots$

π doku

Fill in the grid so that each 3x3 box, row, and column contains the first nine digits of π (3.14159265).

9	3	5	2	1	1	6	4	5
1	6	2	4	5	5	3	9	1
5	1	4	3	6	9	5	2	1
5	5	6	1	4	1	2	3	9
3	4	9	6	2	5	1	1	5
1	2	1	9	5	3	5	6	4
6	1	5	5	3	4	9	1	2
2	9	1	5	1	6	4	5	3
4	5	3	1	9	2	1	5	6

9	1	5	3	5	6	1	2	4
3	1	2	4	1	9	5	5	6
6	5	4	1	2	5	1	9	3
5	3	1	9	1	2	4	6	5
1	4	6	1	3	5	9	5	2
2	9	5	6	5	4	3	1	1
1	5	3	2	6	1	5	4	9
5	6	9	5	4	3	2	1	1
4	2	1	5	9	1	6	3	5

π doku

Fill in the grid so that each 3x3 box, row, and column contains the first nine digits of π (3.14159265).

9		5	2	1			4	5
1					5	3		
	1		3					1
	5			4		2		9
3			6		5			5
1		1		5			6	
6					4		1	
		1	5					3
4	5			9	2	1		6

Time started: _____

Time finished: _____

9			3		6	1		4
	1			1			5	
6		4			5	1		
5		1	9		2			5
	4						5	
2			6		4	3		1
		3	2			5		9
	6			4			1	
4		1	5		1			5

Time started: _____

Time finished: _____

Let's Get Irrational!

Below you'll find the first 1,000 digits of π . See how many you can memorize using whatever memorization technique works best for you!

$\pi=$ 3.14159265358979323846264338327950288419716939937510
58209749445923078164062862089986280348253421170679821
48086513282306647093844609550582231725359408128481117
45028410270193852110555964462294895493038196442881097
56659334461284756482337867831652712019091456485669234
60348610454326648213393607260249141273724587006606315
58817488152092096282925409171536436789259036001133053
05488204665213841469519415116094330572703657595919530
92186117381932611793105118548074462379962749567351885
75272489122793818301194912983367336244065664308602139
49463952247371907021798609437027705392171762931767523
84674818467669405132000568127145263560827785771342757
78960917363717872146844090122495343014654958537105079
22796892589235420199561121290219608640344181598136297
74771309960518707211349999998372978049951059731732816
09631859502445945534690830264252230825334468503526193
11881710100031378387528865875332083814206171776691473
03598253490428755468731159562863882353787593751957781
857780532171226806613001927876611195909216420198

π Decorating Contest



3.141592653589793238462643383279502884197169399375105820974944592307816406286

288109756659334461284756482337867831652712019091456

Certificate of Participation

π Day 2016

208998628034825342117067982148086513282306647093844

609550582231725359408128481174502841027019385211055596446229489549303819644