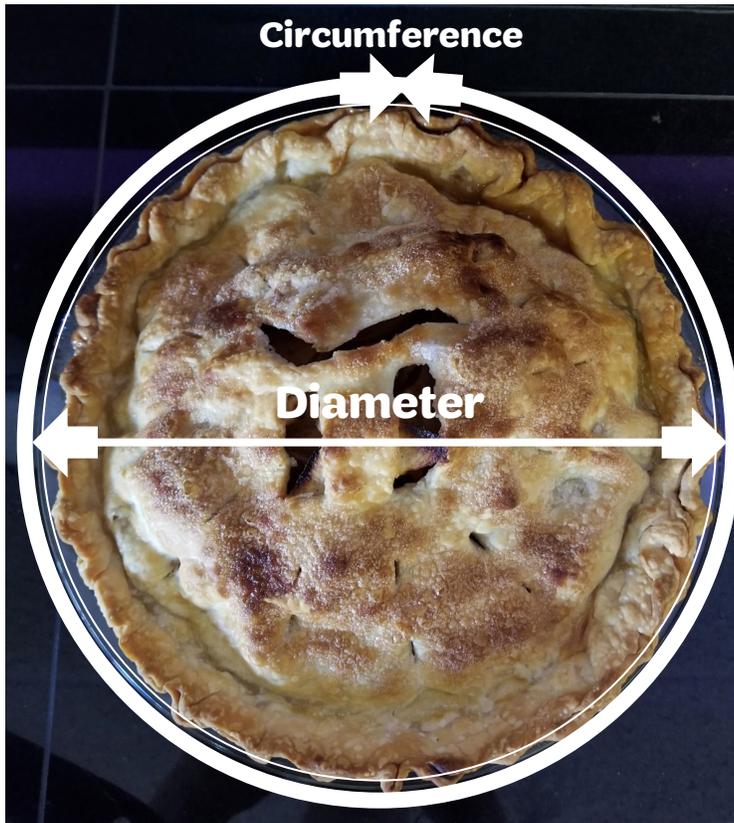


Pi(e) Day Celebration

Looking for a fun way to learn about math and enjoy pie on March 14? We've put together some of our favorite pi day activities and recipes for you to join us in celebrating pi(e) day! The activities below recommend using the internet for research on pi. Be sure to complete the [Girl Scout Internet Safety Pledge](#) before you start.

DISCOVER



What is Pi?

You can watch this video to learn about the ratio pi, and why we celebrate pi on March 14 with pie by PBS Kids:

www.youtube.com/watch?v=mC3Vj1q5rXo

Pi is the ratio of a circle's circumference to its diameter. This ratio stays the same, no matter how big or small the circle.

$$\pi = \frac{\text{Circumference}}{\text{Diameter}}$$

Pi is an irrational number. This means that the more exact you are with measuring this ratio, the longer the number will be, and there is no pattern to the digits. The symbol for pi is π .

The first 10 digits of pi are: 3.141592653

Pi starts with 3.14, which is why we celebrate it on March 14 (3/14)!

Why is Pi so Important?

Pi is used when calculating anything circular or spherical, and is important in a lot of science, technology, engineering and math careers, like space science! Can you think of how many round or circular objects you use everyday? Pi has been used to create all of those round or spherical objects. Check out this quick video from Tech Insider about why pi is so important in life! www.youtube.com/watch?v=RpWFlI2Iz9E

Make Your Own Berry Pie!

Source: www.allrecipes.com/recipe/12384/three-berry-pie/



Ingredients

Pastry for a Double-Crust Pie:

2 cups all-purpose flour
1/2 teaspoon salt
2/3 cup shortening, chilled
6 tablespoons cold water

Three-Berry Filling:

1 cup fresh strawberries, halved
2 cups fresh raspberries
1 1/2 cups fresh blueberries
1/2 cup white sugar
3 tablespoons cornstarch

Instructions

1. Combine the flour and salt. Using a pastry blender, cut in the shortening until the pieces are the size of small peas. Sprinkle 1 tablespoon of the water over part of the mixture, then gently toss with a fork. Push moistened portion to the side of the bowl. Repeat, using 1 tablespoon of water at a time, until all is moistened. Divide the dough in half. Form each half into a ball and flatten slightly. Wrap in plastic and refrigerate for at least 30 minutes.
2. Transfer one piece of dough to a lightly floured surface. Roll the dough from the center to the edges to form a 12-inch circle. Wrap the crust around the rolling pin. Unroll it onto a 9-inch pie plate. Ease the crust into the pie plate, being careful not to stretch it. Trim the bottom crust evenly with the rim of the pie plate, and return the pastry-lined pie plate to the refrigerator.
3. In a large mixing bowl, stir together the sugar and cornstarch. Add the strawberries, raspberries, and blueberries; gently toss until berries are coated. Allow fruit mixture to stand for about 15 minutes.
4. Preheat the oven to 375 degrees F (190 degrees C). Place a baking sheet in the oven to preheat.
5. Roll out the remaining pastry for the top crust. Stir the berry mixture and pour the filling into the pastry-lined pie plate. Place the top crust over the pie and trim the edges, leaving a 1/2-inch overhang. Fold the top crust under the bottom crust, pressing lightly to seal. Crimp the edges of the crust and cut vents in the top to allow steam to escape. To prevent over-browning, cover the edge of the pie with foil.
6. Bake in the preheated oven on the baking tray for 25 minutes. Remove the foil.
7. Bake for an additional 20 to 30 minutes, or until the filling is bubbling and the crust is golden. Cool on a wire rack.

Check out this great article by Jessica Born about how baking helps you bring STEM (science, technology, engineering and math) to life:

blog.pitsco.com/blog/muffins-for-mom-baking-stem-lesson

CONNECT

Try a pi day activity!

Make Your Own Pi Bracelet

Source: www.pinkstripeysocks.com/2014/03/pi-day-activity-make-pi-day-bracelets.html

Watercolor Paint a Pi Skyline

Source: www.whatdowedoallday.com/math-art-for-kids-pi/

Read a Book About Pi!

One of our favorites is Sir Cumference and the Dragon of Pi

by Cindy Neuschwander! Check your local library to see if they have a copy available. You can listen to an online reading here: www.youtube.com/watch?v=xJ4MbU8928c

Play a Pi Themed Game!

If you have a large group, you can try playing the Race to Pi card game!

Source: mathgeekmama.com/pi-day-card-game/



Setting Up the Pi Day Card Game

To set up the game, you will need a deck of cards with tens and face cards removed, except Ace, which represents one and Jack, which represents zero. If you're playing with a large group, you may want to use two decks of cards.

You may also want to print a copy of the number pi for players to reference (especially younger kids who don't know many digits of pi).

To make it more challenging, you can also play this game with UNO cards or play without the printed copy of the number pi and require players to have the digits memorized.



How to Play Race to Pi

Shuffle the cards sufficiently and deal each player 7 cards. The object of the game is to be the first player to play all the cards in your hand. Place the rest of the deck face down in the middle. The first player then tries to play a card from their hand. In order to play a card, they must play the next digit of the number pi. Therefore, the first player must play a 3. If the player doesn't have a 3, they draw a card and it is the next player's turn. They then must play a 3 to begin the digits of the number pi. Again, if they don't have a 3, they draw a card and play continues to the next player. Once someone plays a 3, the next player must play a 1 or draw a card, then a 4, and so on.

The first player to play all of their cards wins!

Challenge Yourself to Solve a Pi Problem!

NASA Pi in the Sky Challenge

The Curiosity Mars rover didn't have an odometer like those found in cars, so rover drivers calculated how far the rover had driven based on wheel rotations. Since landing on Mars in August 2012, Curiosity's 50-centimeter-diameter wheels have rotated 3689.2 times in 568 sols (Martian days). How many kilometers did Curiosity travel? Solve the equation below.

Source: www.jpl.nasa.gov/edu/pdfs/piday2014.pdf

Want more questions like this? Check out more of NASA's Pi in the Sky Challenges here:
www.jpl.nasa.gov/edu/teach/tag/search/Pi+Day

Cutting π to Prove π

Materials

- circular objects
- string
- scissors
- tape
- paper

Instructions

Carefully wrap string around the circumference of your circular object. Cut the string when it is exactly the same length as the circumference.

Now take your “string circumference” and stretch it across the diameter of your circular object. Cut as many “string diameters” from your “string circumference” as you can. How many diameters could you cut? Compare your data with that of others. What do you notice?

What’s Going On?

This is a hands-on way to divide a circle’s circumference by its diameter. No matter what circle you use, you’ll be able to cut 3 complete diameters and have a small bit of string left over. Estimate what fraction of the diameter this small piece could be (about $1/7$). You have “cut pi,” about 3 and $1/7$ pieces of string, by determining how many diameters can be cut from the circumference. Tape the 3 + pieces of string onto paper and explain their significance.

Source: www.exploratorium.edu/pi/activities

TAKE ACTION

- Inspire your friends to learn about pi by sharing your baked pie.
- Tell a younger Girl Scout all about pi by teaching her your favorite pi day activity.
- Have a conversation with your math teacher about pi!
- Share your Pi Day story with Girl Scouts by using #gsoswPiDay.