

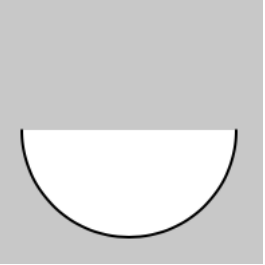
PI

A `Number` constant that's approximately 3.1416.

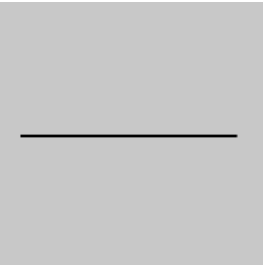
`PI` is the mathematical constant π . It's useful for many tasks that involve rotation and oscillation. For example, calling `rotate(PI)` rotates the coordinate system `PI` radians, which is a half turn (180°).

Note: `TWO_PI` radians equals 360°, `PI` radians equals 180°, `HALF_PI` radians equals 90°, and `QUARTER_PI` radians equals 45°.

Examples



```
function setup() {  
  createCanvas(100, 100);  
  
  background(200);  
  
  // Draw an arc from 0 to PI.  
  arc(50, 50, 80, 80, 0, PI);  
  
  describe('The bottom half of a circle drawn in white on a  
gray background.');
```



```
function setup() {  
  createCanvas(100, 100);  
  
  background(200);  
  
  // Translate the origin to the center.  
  translate(50, 50);  
  
  // Draw a line.  
  line(0, 0, 40, 0);  
  
  // Rotate a half turn.  
  rotate(PI);  
  
  // Draw the same line, rotated.  
  line(0, 0, 40, 0);  
  
  describe('A horizontal black line on a gray background.');
```



```
function setup() {  
  createCanvas(100, 100);  
  
  describe(  
    'A red circle and a blue circle oscillate from left to  
right on a gray background. The circles drift apart, then meet  
in the middle, over and over again.'  
  );  
}  
  
function draw() {  
  background(200);  
  
  // Translate the origin to the center.  
  translate(50, 50);  
  
  // Calculate the x-coordinates.  
  let x1 = 40 * sin(frameCount * 0.05);  
  let x2 = 40 * sin(frameCount * 0.05 + PI);  
  
  // Style the oscillators.  
  noStroke();  
  
  // Draw the red oscillator.  
  fill(255, 0, 0);  
  circle(x1, 0, 20);  
  
  // Draw the blue oscillator.  
  fill(0, 0, 255);  
  circle(x2, 0, 20);
```



This page is generated from the comments in `src/core/constants.js`. Please feel free to edit it and submit a pull request!

Related References

ADD

ALT

ARROW

AUTO

AUTO allows us to automatically set the width or height of an element (but not both), based on the current height and width of the element.

p5.js

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