HALF_PI

A `Number` constant that's approximately 1.5708.

`HALF_PI` is half the value of the mathematical constant π. It's useful for many tasks that involve rotation and oscillation. For example, calling `rotate(HALF_PI)` rotates the coordinate system `HALF_PI` radians, which is a quarter turn (90˚).

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 HALF_PI.
  arc(50, 50, 80, 80, 0, HALF_PI);

  describe('The bottom-right quarter 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 quarter turn.
  rotate(HALF_PI);

  // Draw the same line, rotated.
  line(0, 0, 40, 0);

  describe('Two black lines on a gray background. One line
extends from the center to the right. The other line extends
from the center to the bottom.');
}
```

```
function setup() {
  createCanvas(100, 100);

  describe(
    'A red circle and a blue circle oscillate from left to
right on a gray background. The red circle appears to chase
the blue circle.'
  );
}

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 + HALF_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);
}
```

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Related References

ADD
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ALT
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ARROW
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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.