# textToPoints()

Returns an array of points outlining a string of text written using the font.

Each point object in the array has three properties that describe the point's location and orientation, called its path angle. For example, `{ x: 10, y: 20, alpha: 450 }`.

The first parameter, `str`, is a string of text. The second and third parameters, `x` and `y`, are the text's position. By default, they set the coordinates of the bounding box's bottom-left corner. See textAlign() for more ways to align text.

The fourth parameter, `fontSize`, is optional. It sets the text's font size. By default, `font.textToPoints()` will use the current textSize().

The fifth parameter, `options`, is also optional. `font.textToPoints()` expects an object with the following properties:

`sampleFactor` is the ratio of the text's path length to the number of samples. It defaults to 0.1. Higher values produce more points along the path and are more precise.

`simplifyThreshold` removes collinear points if it's set to a number other than 0. The value represents the threshold angle to use when determining whether two edges are collinear.

## Examples


```
let font;

function preload() {
  font = loadFont('/assets/inconsolata.otf');
}

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

  background(200);

  // Get the point array.
  let points = font.textToPoints('p5*js', 6, 60, 35, {
sampleFactor:  0.5 });

  // Draw a dot at each point.
  for (let p of points) {
    point(p.x, p.y);
  }

  describe('A set of black dots outlining the text "p5*js" on
a gray background.');
}
```

## Syntax

```
textToPoints(str, x, y, [fontSize], [options])
```

## Parameters

| | |
|---|---|
| str | String: string of text. |
| x | Number: x-coordinate of the text. |
| y | Number: y-coordinate of the text. |
| fontSize | Number: font size. Defaults to the current textSize(). |
| options | Object: object with sampleFactor and simplifyThreshold properties. |

## Returns

Array: array of point objects, each with x, y, and alpha (path angle) properties.

This page is generated from the comments in src/typography/p5.Font.js . Please feel free to edit it and submit a pull request!

## Related References

**font**
The font's underlying opentype.js font object.

**textBounds**
Returns the bounding box for a string of text written using the font.

**textToPoints**
Returns an array of points outlining a string of text written using the font.

**image**
Draws an image to the canvas.