



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

  background(200);

  // Set the coordinates for the curve's anchor and control
  points.
  let x1 = 85;
  let x2 = 10;
  let x3 = 90;
  let x4 = 15;
  let y1 = 20;
  let y2 = 10;
  let y3 = 90;
  let y4 = 80;

  // Style the curve.
  noFill();

  // Draw the curve.
  bezier(x1, y1, x2, y2, x3, y3, x4, y4);

  // Draw circles along the curve's path.
  fill(255);

  // Top-right.
  let x = bezierPoint(x1, x2, x3, x4, 0);
  let y = bezierPoint(y1, y2, y3, y4, 0);
  circle(x, y, 5);

  // Center.
  x = bezierPoint(x1, x2, x3, x4, 0.5);
  y = bezierPoint(y1, y2, y3, y4, 0.5);
  circle(x, y, 5);
}
```



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

  describe('A black s-curve on a gray square. A white circle
  moves back and forth along the curve.');
```

```
function draw() {
  background(200);

  // Set the coordinates for the curve's anchor and control
  points.
  let x1 = 85;
  let x2 = 10;
  let x3 = 90;
  let x4 = 15;
  let y1 = 20;
  let y2 = 10;
  let y3 = 90;
  let y4 = 80;

  // Draw the curve.
  noFill();
  bezier(x1, y1, x2, y2, x3, y3, x4, y4);

  // Calculate the circle's coordinates.
  let t = 0.5 * sin(frameCount * 0.01) + 0.5;
  let x = bezierPoint(x1, x2, x3, x4, t);
  let y = bezierPoint(y1, y2, y3, y4, t);
}
```

Syntax

`bezierPoint(a, b, c, d, t)`

Parameters

- | | |
|---|--|
| a | Number: coordinate of first anchor point. |
| b | Number: coordinate of first control point. |
| c | Number: coordinate of second control point. |
| d | Number: coordinate of second anchor point. |
| t | Number: amount to interpolate between 0 and 1. |

Returns

Number: coordinate of the point on the curve.

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

Related References

bezier Draws a Bézier curve.	bezierDetail Sets the number of segments used to draw Bézier curves in WebGL mode.	bezierPoint Calculates coordinates along a Bézier curve using interpolation.	bezierTangent Calculates coordinates along a line that's tangent to a Bézier curve.
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p5.js

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