There are five line commands for <path> nodes. As the name suggests, each one just draws a straight line between two points. The first command is the "Move To" or M, which was described above. It takes two parameters, a coordinate  ' x ' and coordinate ' y ' to move to. If your cursor already was somewhere on the page, no line is drawn to connect the two places. The "Move To" command appears at the beginning of paths to specify where the drawing should start. e.g. : M x y

<svg width="200" height="200" xmlns="http://www.w3.org/2000/svg"> <path d="M10 10"/> <!-- Points --> <circle cx="10" cy="10" r="2" fill="red"/> </svg>

L x y (or l dx dy)

H x (or h dx) //horizontal line

V y (or v dy) //vertical line

<svg width="100" height="100" xmlns="http://www.w3.org/2000/svg"> <path d="M10 10 H 90 V 90 H 10 L 10 10"/> <!-- Points --> <circle cx="10" cy="10" r="2" fill="red"/> <circle cx="90" cy="90" r="2" fill="red"/> <circle cx="90" cy="10" r="2" fill="red"/> <circle cx="10" cy="90" r="2" fill="red"/> </svg>

Z (or z)

<path d="M10 10 H 90 V 90 H 10 Z" fill="transparent" stroke="black"/>

<path d="M10 10 h 80 v 80 h -80 Z" fill="transparent" stroke="black"/>

**Curve commands**

The last set of coordinates here (x,y) are where you want the line to end. The other two are control points. The control point for the start of your curve is (x1,y1), and (x2,y2) is the end point of your curve. The control points essentially describe the slope of your line starting at each point. The Bezier function then creates a smooth curve that transfers you from the slope you established at the beginning of your line, to the slope at the other end.

C x1 y1, x2 y2, x y (or c dx1 dy1, dx2 dy2, dx dy)

<svg width="190" height="160" xmlns="http://www.w3.org/2000/svg"> <path d="M10 10 C 20 20, 40 20, 50 10" stroke="black" fill="transparent"/> <path d="M70 10 C 70 20, 120 20, 120 10" stroke="black" fill="transparent"/> <path d="M130 10 C 120 20, 180 20, 170 10" stroke="black" fill="transparent"/> <path d="M10 60 C 20 80, 40 80, 50 60" stroke="black" fill="transparent"/> <path d="M70 60 C 70 80, 110 80, 110 60" stroke="black" fill="transparent"/> <path d="M130 60 C 120 80, 180 80, 170 60" stroke="black" fill="transparent"/> <path d="M10 110 C 20 140, 40 140, 50 110" stroke="black" fill="transparent"/> <path d="M70 110 C 70 140, 110 140, 110 110" stroke="black" fill="transparent"/> <path d="M130 110 C 120 140, 180 140, 170 110" stroke="black" fill="transparent"/> </svg>

S produces the same type of curve as earlier, but if it follows another S command or a C command, the first control point is assumed to be a reflection of the one used previously. If the S command doesn't follow another S or C command, then it is assumed that both control points for the curve are the same. An example of this syntax is shown below, and in the figure to the left the specified control points are shown in red, and the inferred control point in blue.

S x2 y2, x y (or s dx2 dy2, dx dy)

<svg width="190" height="160" xmlns="http://www.w3.org/2000/svg"> <path d="M10 80 C 40 10, 65 10, 95 80 S 150 150, 180 80" stroke="black" fill="transparent"/> </svg>

### Arcs

The other type of curved line you can create using SVG is the arc, called with A. Arcs are sections of circles or ellipses. For a given x-radius and y-radius, there are two ellipses that can connect any two points (as long as they're within the radius of the circle). Along either of those circles there are two possible paths that you can take to connect the points, so in any situation there are four possible arcs available. Because of that, arcs have to take in quite a few arguments:

A rx ry x-axis-rotation large-arc-flag sweep-flag x y a rx ry x-axis-rotation large-arc-flag sweep-flag dx dy

At its start, the arc element takes in two arguments for the x-radius and y-radius. If you need to, look up [ellipses](https://developer.mozilla.org/en-US/Web/SVG/Element/ellipse) to see how they behave. The third parameter describes the rotation of the arc. This is best explained with an example:

<svg width="320" height="320" xmlns="http://www.w3.org/2000/svg"> <path d="M10 315 L 110 215 A 30 50 0 0 1 162.55 162.45 L 172.55 152.45 A 30 50 -45 0 1 215.1 109.9 L 315 10" stroke="black" fill="green" stroke-width="2" fill-opacity="0.5"/> </svg>

The example shows a path element that goes diagonally across the page. At its center, two elliptical arcs have been cut out (x radius = 30, y radius = 50). In the first one, the x-axis-rotation has been left at 0, so the ellipse that the arc travels around (shown in gray) is oriented straight up and down. For the second arc, though, the x-axis-rotation is set to -45 degrees. This rotates the ellipse so that it is aligned with its minor axis along the path direction, as shown by the second ellipse in the example image.

The four different paths mentioned above are determined by the next two argument flags. As mentioned earlier, there are still two possible ellipses for the path to travel around and two different possible paths on both ellipses, giving four possible paths. The first argument is the large-arc-flag. It simply determines if the arc should be greater than or less than 180 degrees; in the end, this flag determines which direction the arc will travel around a given circle. The second argument is the sweep-flag. It determines if the arc should begin moving at negative angles or positive ones, which essentially picks which of the two circles you will travel around. The example below shows all four possible combinations, along with the two circles for each case.

<svg width="320" height="320" xmlns="http://www.w3.org/2000/svg"> <path d="M10 315 L 110 215 A 30 50 0 0 1 162.55 162.45 L 172.55 152.45 A 30 50 -45 0 1 215.1 109.9 L 315 10" stroke="black" fill="green" stroke-width="2" fill-opacity="0.5"/> </svg>

<svg width="325" height="325" xmlns="http://www.w3.org/2000/svg"> <path d="M80 80 A 45 45, 0, 0, 0, 125 125 L 125 80 Z" fill="green"/> <path d="M230 80 A 45 45, 0, 1, 0, 275 125 L 275 80 Z" fill="red"/> <path d="M80 230 A 45 45, 0, 0, 1, 125 275 L 125 230 Z" fill="purple"/> <path d="M230 230 A 45 45, 0, 1, 1, 275 275 L 275 230 Z" fill="blue"/> </svg>