

x ^a	context	radius ^r
x0 ^a	lineX0 ^a	innerRadius ^r
x1 ^a	lineY0 ^a	outerRadius ^r
y ^a	lineX1 ^a	lineStartAngle ^r
y0 ^a	lineY1 ^a	lineInnerRadius ^r
y1 ^a	angle ^r	lineEndAngle ^r
defined	startAngle ^r	lineOuterRadius ^r
curve	endAngle ^r	

Curves [d3.curve-**F**]

These are not shapes, but passed to lines & areas under their <shape>.curve() call. curves are algorithms that, given input data arrays (“control points”) yield smooth splines.

Basis	CatmullRomOpen
BasisClosed	Linear
BasisOpen	LinearClosed
Bundle	MonotoneX
Cardinal	MonotoneY
CardinalClosed	Natural
CardinalOpen	Step
CatmullRom	StepAfter
CatmullRomClosed	StepBefore

One can also create custom curves.

Links [<link>**G**]

Generate a smooth line segment between passed source and target points for use in tree diagrams.

⌈ vertical^l, horizontal^l, and radial^r links.

source	x ^l	context
target	y ^l	angle ^r radius ^r

Symbols [d3.symbol-**G**]

Generate a symbol:

Circle	Star	Diamond
Cross	Square	Triangle
Wye		

Symbol generators provide the following methods:

item	size	context
------	------	---------

Polygons [d3.polygon-**G**]

d3.polygonHull builds a polygon that covers an array of input points. Other top level functions access properties of the resulting polygon:

Area	Centroid	Contains	Length
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5 Colors

Color Creation [d3]

Create a color from a <color_spec>:

rgb	lab	lch
hsl	hcl	cubehelix

...where <color_spec> is a string that can be the name of the color or a type-specific constructor:

rgb(255, 255, 255)	% RGB
hsl(120, 50%, 20%)	% HSL
#ffeeaa	% hex

Color Properties [<color>]

Get color properties, or yield an externally-usable <color_spec> string:

opacity	copy	formatHex
rgb	displayable	formatHsl
toString		formatRgb

Derivative Colors [<color>]

Return a new, derivative color:

brighter	darker
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Color Schemes [d3]

Categorical schemes, prefixed with scheme-

Category10	Dark2	Pastel1
Accent	Paired	Pastel2
Set1	Set2	Set3
Tableau		

Diverging schemes, prefixed with interpolate- (for continuous) or scheme- (for discrete):

BrBG	PRGn	RdBu	RdYlBu
PiYG	PuOr	RdGy	RdYlGn
Spectral			

Sequential, single-hue schemes, prefixed with interpolate (continuous) or scheme- (discrete):

Blues	Greens	Greys	Oranges
Purples	Reds		

Sequential, multi-hue schemes, prefixed with interpolate- or scheme-:

BuGn	BuPu	GnBu	OrRd
PuBu	PuBuGn	PuRd	RdPu
YlGn	YlGnBu	YlOrBr	YlOrRd

Sequential, multi-hue schemes, available only in continuous form, prefixed with interpolate-:

Cividis	Cool	CubehelixDefault
Inferno	Magma	Plasma
Turbo	Viridis	Warm

Cyclical schemes, prefixed with interpolate-:

Rainbow	Sinebow
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6 Interactions

Dragging [<drag>]

Brushing [<brush>]

Zooms [<zoom>]

7 Transitions & Animation

General Pattern

Easings

Visually “ease” the rate (acceleration) at which objects change their velocity. Preface the following with ease, and optionally suffix with one of: In, Out, or InOut:

Linear	Quad	Cubic
Sin	Exp	Circle
Elastic	Back	Bounce

Interpolators [d3]

An interpolator is a function that takes a number $i \in [0, 1]$ and yields intermediary values in the domain-space of the specific interpolator. The following functions take two parameters that bookend the interpolation range (except for -Discrete, -Basis, and -BasisClosed, which take a single array), and yield interpolators (for color interpolators, see “color” section):

interpolate	-Round	-String
-Date	-Array	-Numb. Array
-Object	-TransformCss	-Svg
-Zoom	-Discrete	-Basis

-BasisClosed
The last two are “splines”, which produce non-linear interpolators roughly following the given array. In addition, d3.piecewise generates a piecewise interpolation visiting the n points of its input array, and d3.quantize generates n samples of a passed interpolator.

Timers

8 Layouts

Chord Layout_L [<chord>]

Force Layout_L [<simulation>]

Voronoi Layout_L [<deLaunay>]

Pies [<pie>]

Lays out a set of arc angles (wedges) for use as input to arcs, in creating a pie chart.

value	sortValues	endAngle
sort	startAngle	padAngle

Sankey Layout_L [d3]

Pack Layout_L [d3]

Partition Layout_L [d3]

Cluster Layout_L [d3]

Used to create a dendrogram diagram.

Treemap Layout_L [d3]

Stacks_L [<stack>]

Generates stacking positions (in a multidimensional array $m \times n$ for m series, n points), which are used as input to areas in creating steamgraphs, or directly in positioning stacked bars.

keys	value	offset
	order	

Top-level algs to pass to order, offset methods:

<u>order</u>	<u>offset</u>
-Order	-Expand
-Ascending	-Diverging
-Descending	-None
-InsideOut	-Silhouette
-None	-Wiggle
-Reverse	

9 Geography

Paths

Projections

Spherical Math

Spherical Shapes

Streams

Transforms

10 Miscellaneous

Quadtrees

Random Numbers