

decksh reference



Keywords

Structure Text

deck
edeck
slide
eslide
canvas
include
grid
text
ctext
etext
rtext
arctext
textblock
textfile
textcode

Lists

list
blist
nlist
clist
li
elist

Graphics

acircle
arc
circle
curve
ellipse
hline
line
pill
polygon
rect
rrect
square
star
vline

Braces Arrows

lbrace
rbrace
ubrace
dbrace
arrow
carrow
clarrow
cuarrow
cdarrow

Images

image
cimage

Charts

dchart
legend

Loop

for
efor

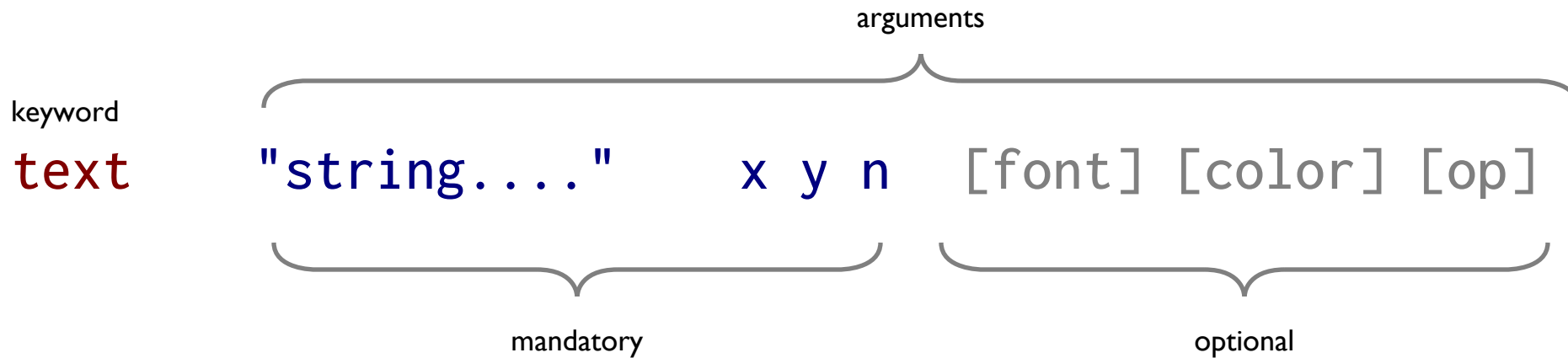
Assignments

polarx
polary
area
format
random
vmap

Data

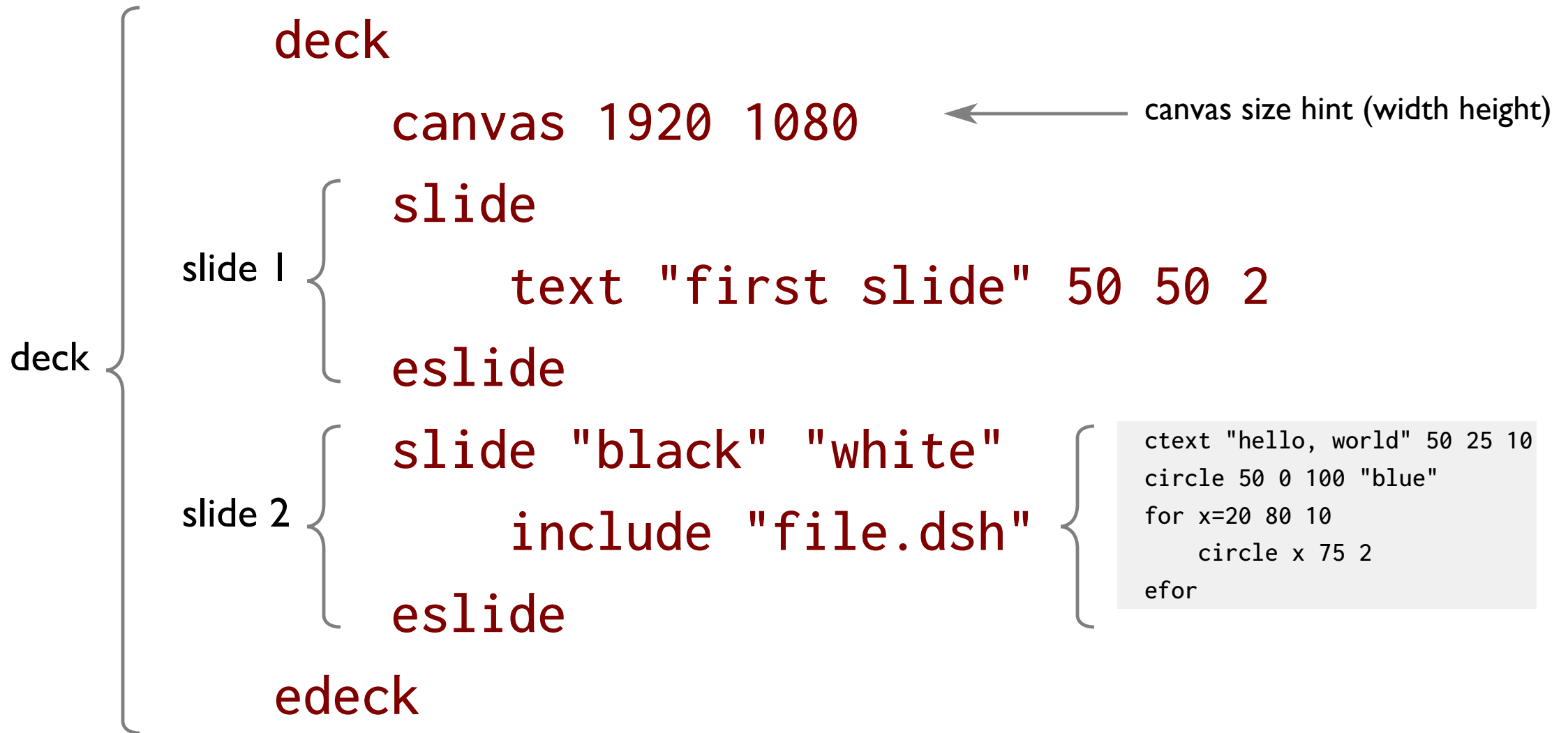
data
edata

Keywords and arguments



text "hello, world" 80 50 2	hello, world
text "hello, world" 80 40 2 "serif"	<i>hello, world</i>
text "hello, world" 80 30 2 "serif" "red"	<i>hello, world</i>
text "hello, world" 80 20 2 "serif" "red" 50	<i>hello, world</i>

Structure



Object Index

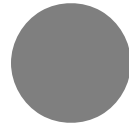
Text

hello, world

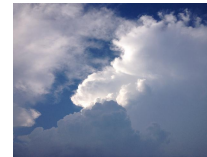
The quick brown
fox jumped over
the lazy dog

what's up, Doc?

Graphics



Images



sky

Lists

- First
- Second
- Third

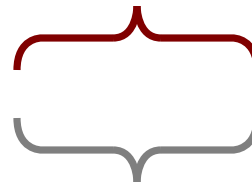
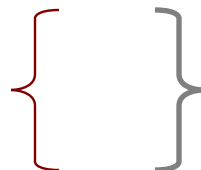
1. First
2. Second
3. Third

First
Second
Third

Arrows



Braces



Textual Elements

Left-aligned	text	"..." x y fontsize [font] [color] [op] [link]
Centered	ctext	"..." x y fontsize [font] [color] [op] [link]
End-aligned	etext	"..." x y fontsize [font] [color] [op] [link]
Rotated	rtext	"..." x y angle fontsize [font] [color] [op] [link]
Text on an arc	arctext	"..." x y rad a1 a2 fontsize [font] [color] [op] [link]
Block text	textblock	"..." x y w fontsize [font] [color] [op] [link]
File contents	textfile	"file" x y fontsize [font] [color] [op] [spacing]
Code listing	textcode	"file" x y w fontsize [color]

hello, world
(x,y)

```
text "... " x y fontsize [font] [color] [op] [link]
```

abc

```
text "abc" 20 20 4
```

abc

```
text "abc" 75 20 7 "mono" "maroon"
```

hello, world

(x,y)

```
ctext "... " x y fontsize [font] [color] [op] [link]
```

abc

```
ctext "abc" 20 20 4
```

abc

```
ctext "abc" 80 20 7 "mono" "maroon"
```


hello, world.

(x,y)

```
etext "... " x y fontsize [font] [color] [op] [link]
```

abc

```
etext "abc" 20 20 4
```

abc

```
etext "abc" 80 20 7 "mono" "maroon"
```

hello, world

(x,y)

`rtext "... " x y angle fontsize [font] [color] [op] [link]`

abc

`ctext 20 20 30 3`

abc

`ctext 50 20 90 5`

abc

`ctext 80 20 270 4 "sans" "maroon"`

a1 hello there world a2
(x,y)

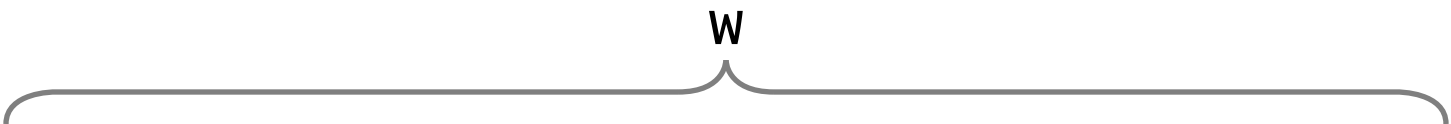
```
arctext "... " x y radius a1 a2 fontsize [font] [color] [op]
```

What is up

This is curvy

```
arctext "What is up" 25 20 10 180 90 3 "mono"
```

```
arctext "This is curvy" 75 30 10 180 360 3 "mono"
```

(x, y)  “Where justice is denied, where poverty is enforced, where ignorance prevails, and where any one class is made to feel that society is an organized conspiracy to oppress, rob and degrade them, neither persons nor property will be safe.”

`textblock "... " x y w fontsize [font] [color] [op]`

“Where justice is denied, where poverty is enforced, where ignorance prevails, and where any one class is made to feel that society is an organized conspiracy to oppress, rob and degrade them, neither persons nor property will be safe.”

`textblock "... " 10 35 30 2`

“Where justice is denied,
where poverty is enforced,
where ignorance prevails,
and where any one class is
made to feel that society
is an organized conspiracy
to oppress, rob and degrade
them, neither persons nor
property will be safe.”

`textblock "... " 50 35 10 1 "sans" "maroon"`

(x,y) This is the contents
of a file. it has lines of text.
Reading is fundamental.

```
textfile "filename" x y fontsize [font] [color] [op]
```

This is the contents
of a file. it has lines of text.
Reading is fundamental.

```
textfile "example.txt" 10 35 2
```

```
package main
```

```
import "fmt"
```

```
func main() {
```

```
    fmt.Println("hello, world")
```

```
}
```

```
textfile "hw.go" 55 35 1.6 "mono" "maroon"
```

(x,y)

W

```
package main
```

```
import "fmt"
```

```
func main() {  
    fmt.Println("hello, world")  
}
```

`textcode "filename" x y w fontsize [color]`

```
package main  
  
import "fmt"  
  
func main() {  
    fmt.Println("hello, world")  
}
```

`textcode "hw.go" 10 35 25 1.0`

```
package main
```

```
import "fmt"
```

```
func main() {  
    fmt.Println("hello, world")  
}
```

`textcode "hw.go" 55 35 40 1.6 "maroon"`

Graphical Elements

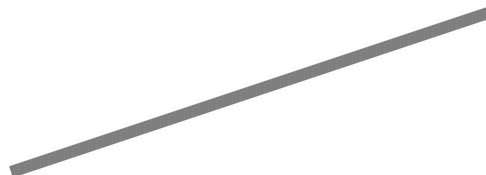
Line	line	x1 y1 x2 y2 lw [color] [op]
Horizontal line	hline	x y w [lw] [color] [op]
Vertical line	vline	x y h [lw] [color] [op]
Elliptical arc	arc	x y w h a1 a2 [lw] [color] [op]
Quadratic Bezier	curve	bx by cx cy ex ey [lw] [color] [op]
Circle	circle	x y w [color] [op]
Area circle	acircle	x y area [color] [op]
Ellipse	ellipse	x y w h [color] [op]
Square	square	x y w [color] [op]
Rectangle	rect	x y w h [color] [op]
Rounded rectangle	rrect	x y w h radius [color]
Pill shape	pill	x y w h [color]
Polygon	polygon	"x1 x2...xn" "y1 y2...yn" [lw] [color] [op]
N-sided star	star	x y sides inner outer [color] [op]

`lw {` 
`(x1,y1)` `(x2,y2)`

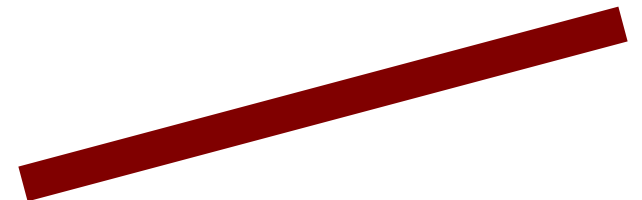
`line x1 y1 x2 y2 lw [color] [op]`



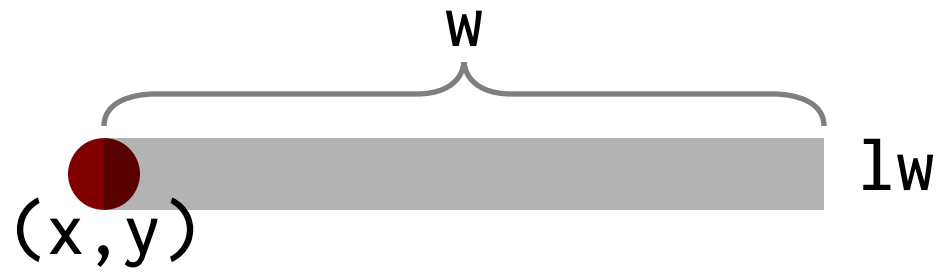
`line 10 20 30 20`



`line 40 20 60 30 0.5`



`line 70 20 95 30 1.5 "maroon"`



`hline x y w [lw] [color] [op]`



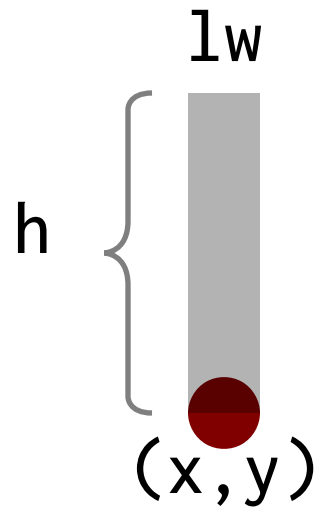
`hline 15 20 10`



`hline 40 20 20 1`



`hline 70 20 20 5 "maroon" 20`



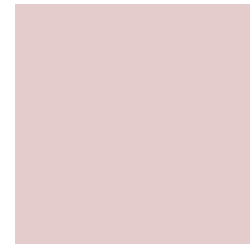
`vline x y h [lw] [color] [op]`



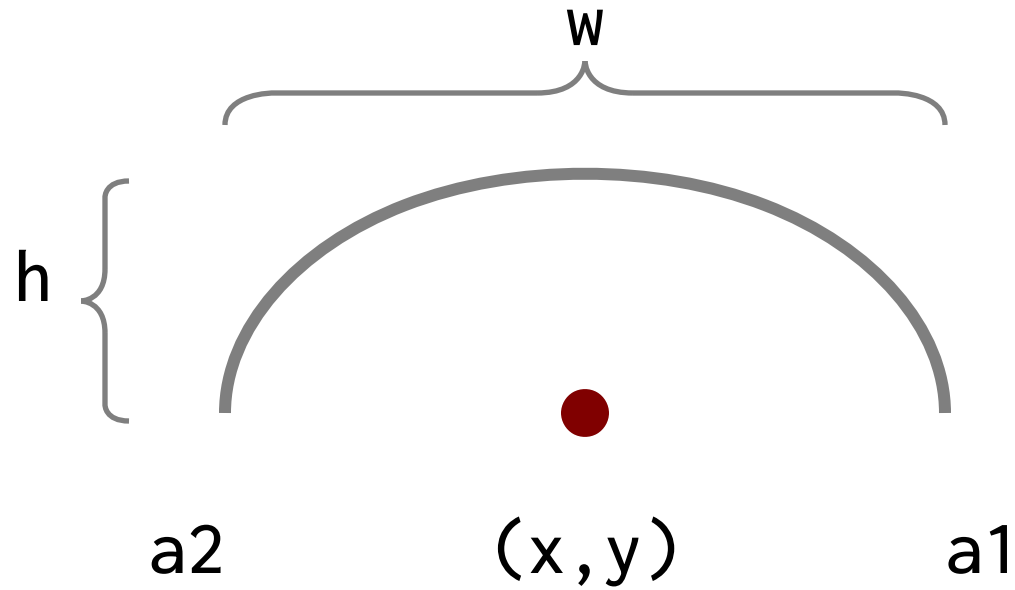
`vline 20 20 15`



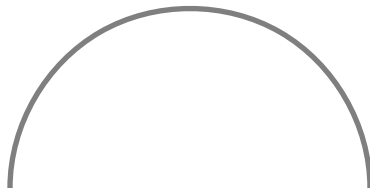
`vline 50 20 15 2`



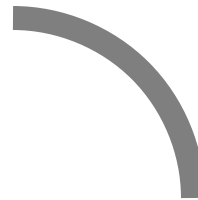
`vline 80 20 15 10 "maroon" 20`



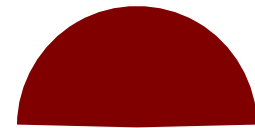
`arc x y w h a1 a2 [lw] [color] [op]`



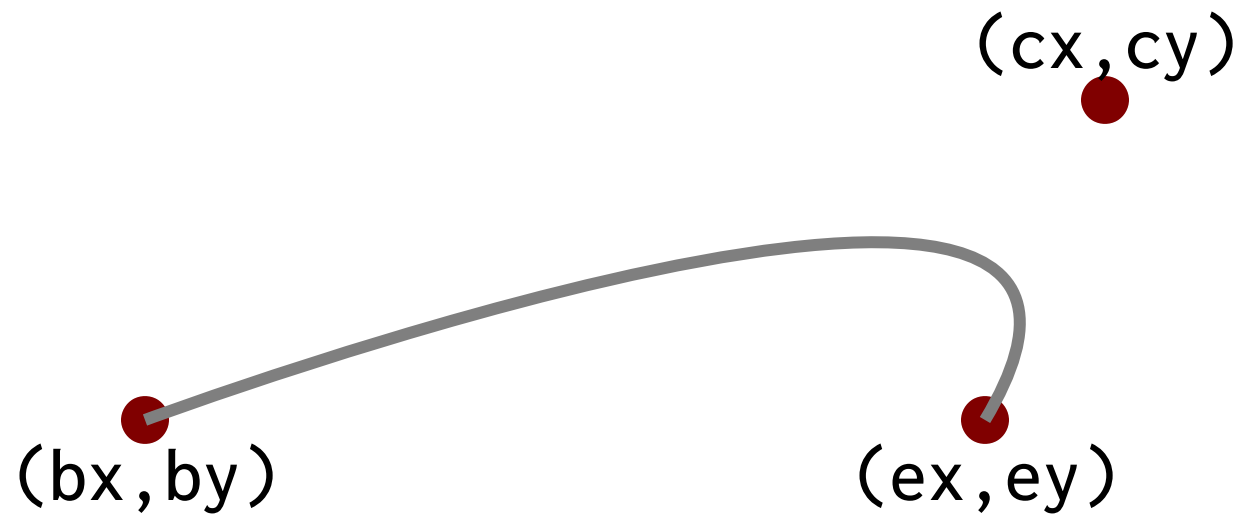
`arc 20 20 15 15 0 180`



`arc 50 20 15 15 0 90 1`



`arc 80 20 5 5 0 180 5 "maroon"`



`curve bx by cx cy ex ey [lw] [color] [op]`



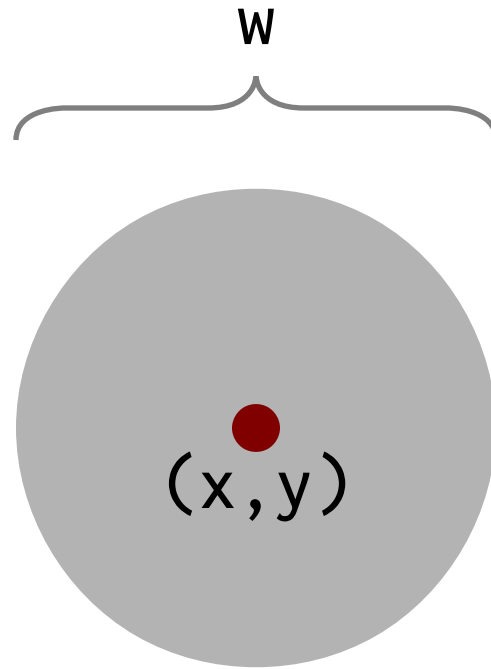
`curve 15 20 25 30 30 25`



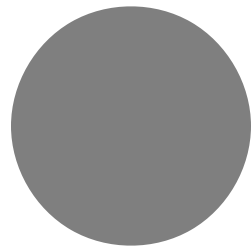
`curve 15 20 25 30 30 25`



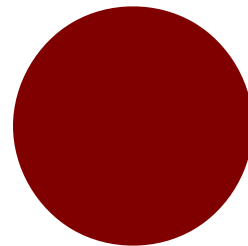
`curve 70 20 70 30 90 25 0.5 "maroon"`



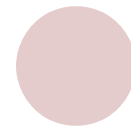
`circle x y w [color] [op]`



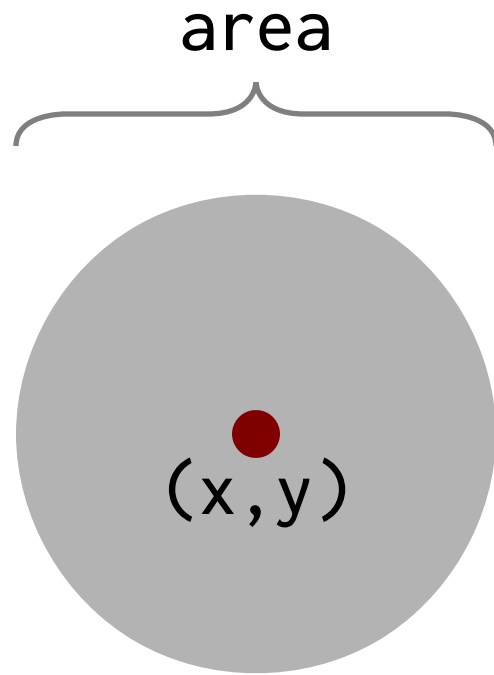
`circle 20 20 10`



`circle 50 20 10 "maroon"`



`circle 80 20 5 "maroon" 20`



`acircle x y area [color] [op]`



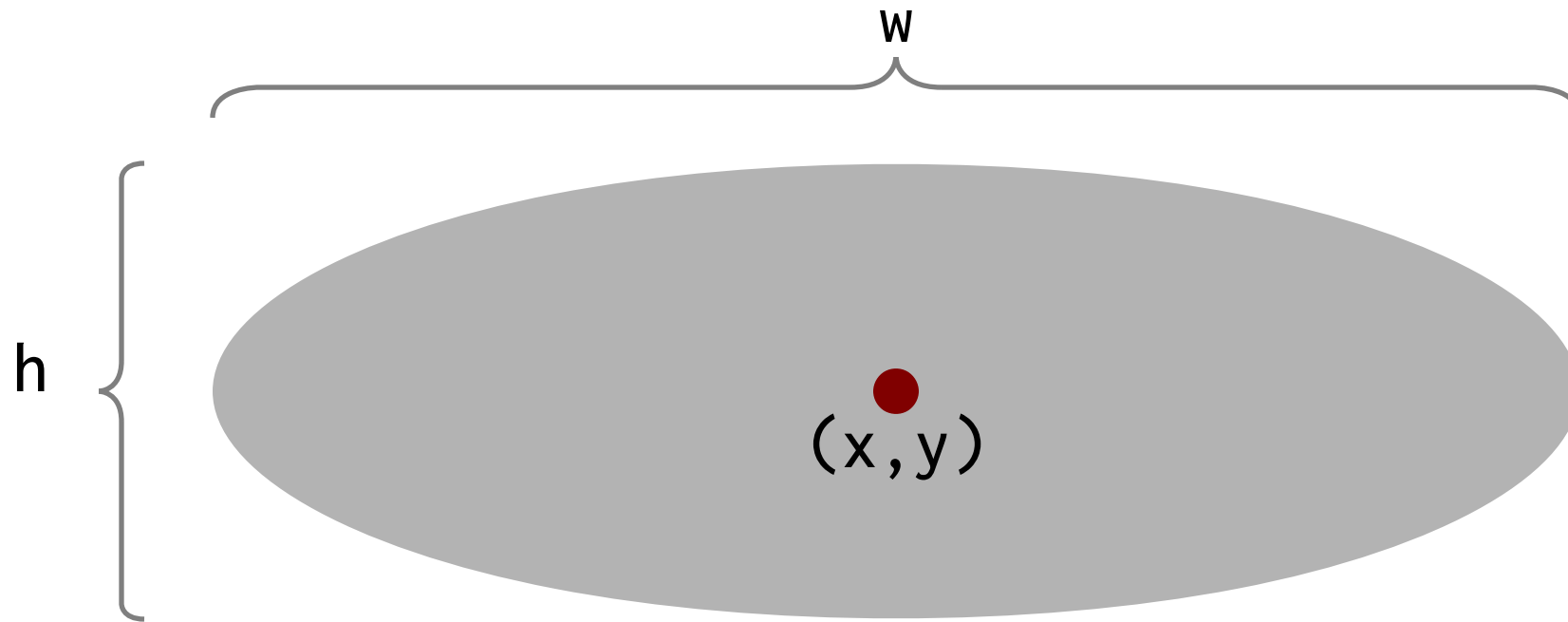
`acircle 20 20 10`



`acircle 50 20 10 "maroon"`



`acircle 80 20 5 "maroon" 20`



`ellipse x y w h [color] [op]`



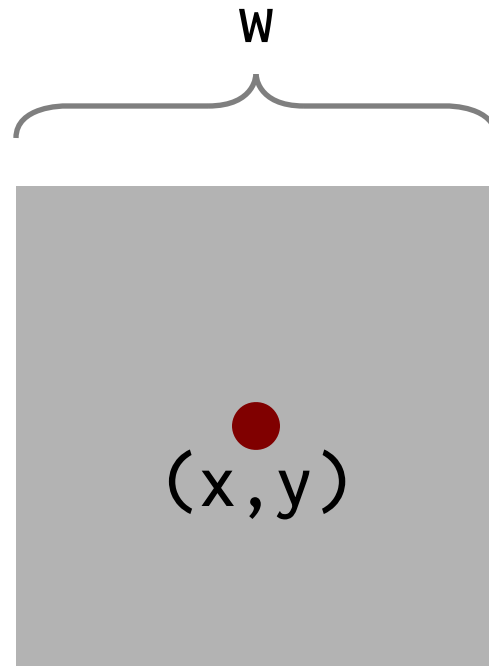
`ellipse 20 20 10 5`



`ellipse 50 20 10 5 "maroon"`



`ellipse 80 20 5 10 "maroon" 20`



square x y w [color] [op]



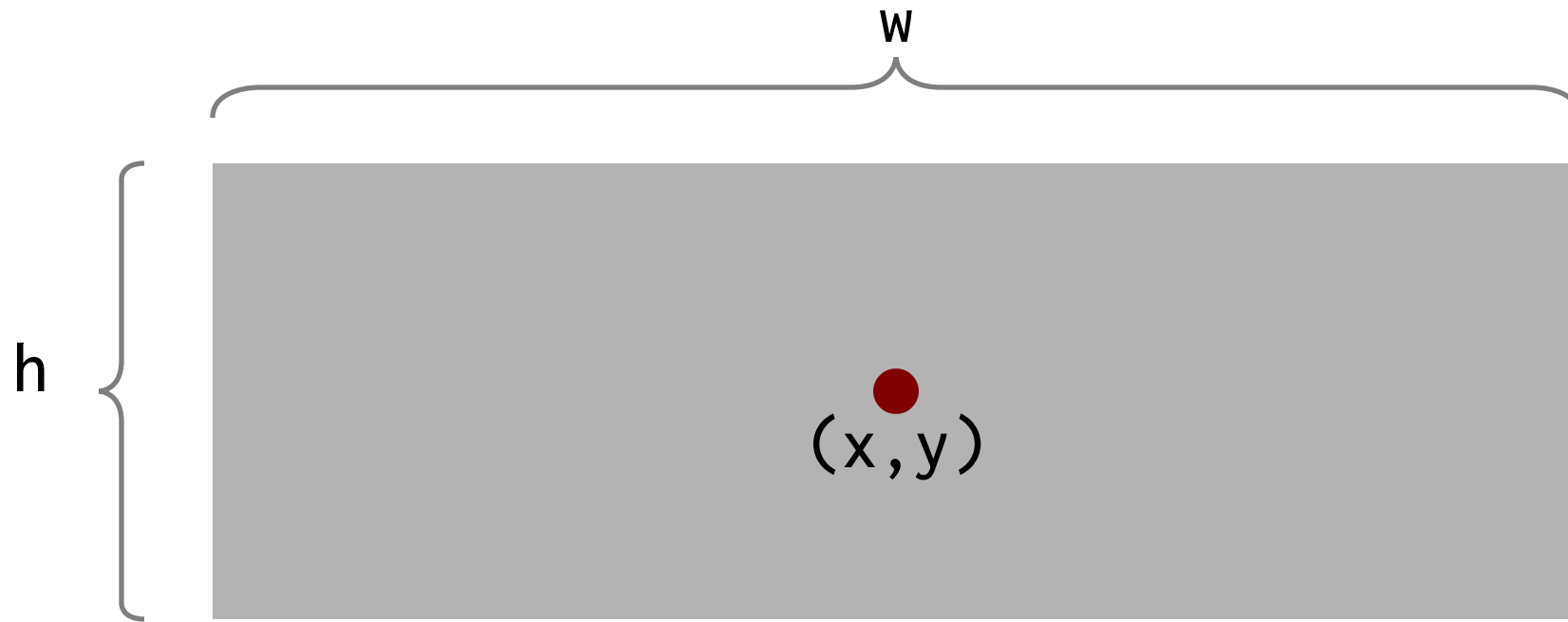
square 20 20 10



square 50 20 10 "maroon"



square 80 20 5 "maroon" 20



`rect x y w h [color] [op]`



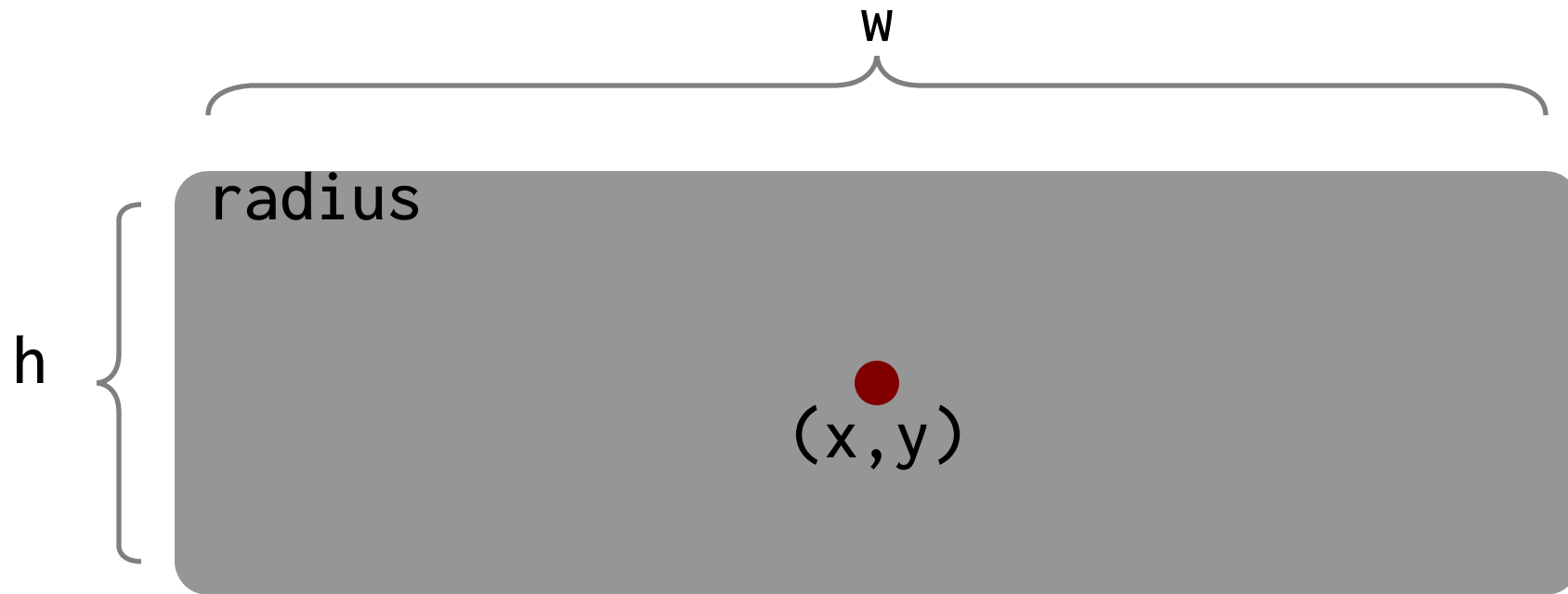
`rect 20 20 10 5`



`rect 50 20 10 5 "maroon"`



`rect 80 20 5 10 "maroon" 20`



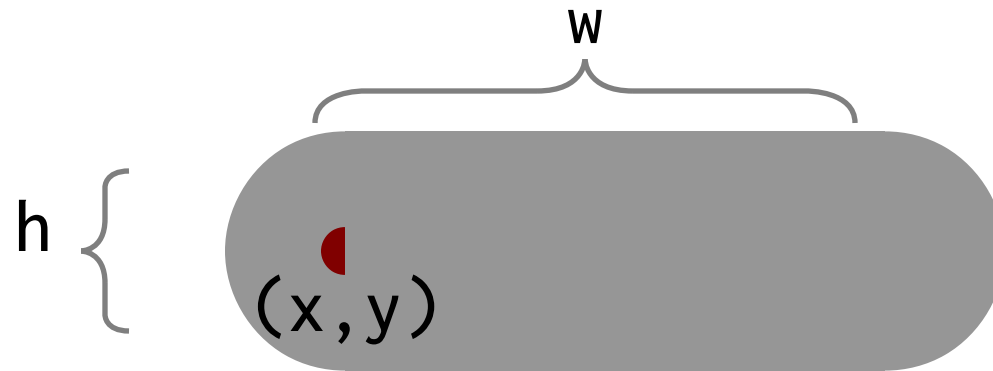
`rrect x y w h radius [color] [op]`



`rrect 20 20 10 5 1`



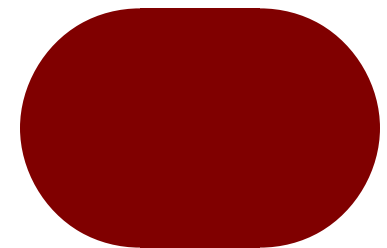
`rrect 80 20 5 10 1 "maroon"`



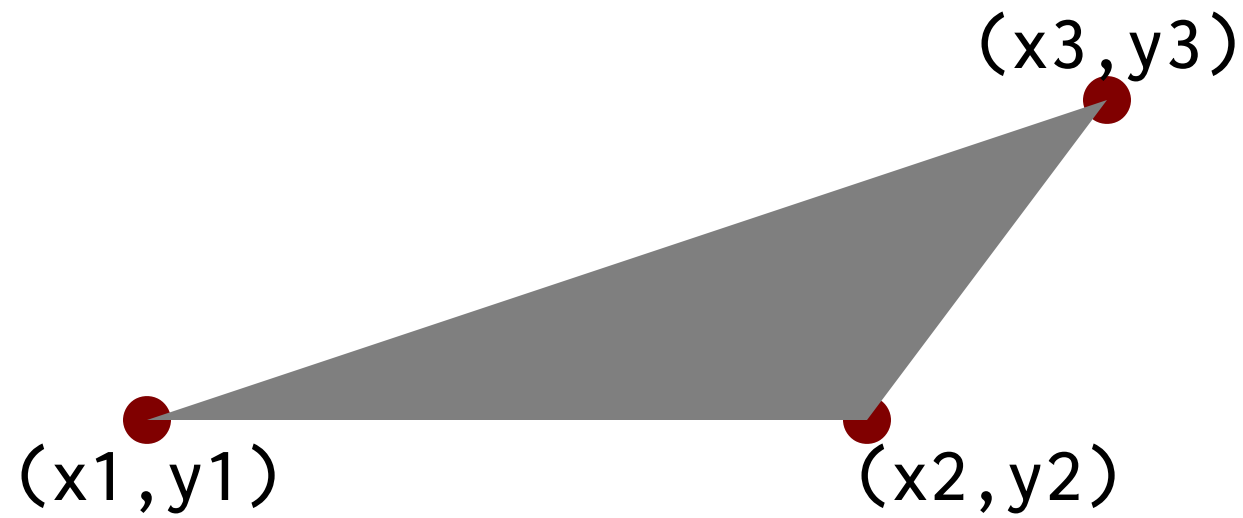
`pill x y w h [color]`



`pill 20 20 10 5`



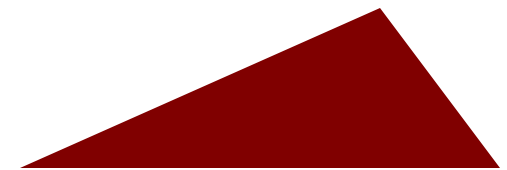
`pill 80 20 5 10 "maroon"`



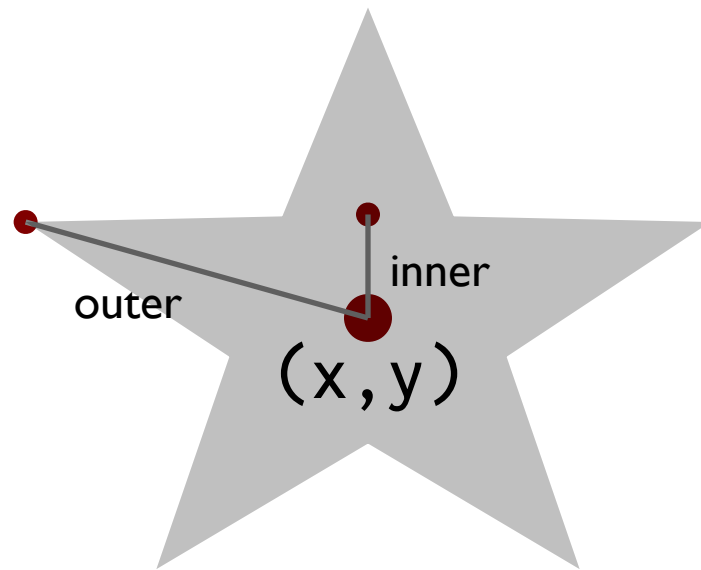
`polygon "x1 x2...xn" "y1 y2...yn" [color] [op]`



`polygon "10 25 20" "20 30 20"`



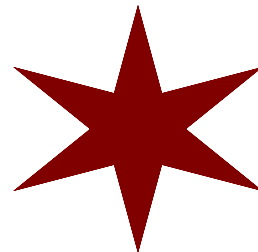
`polygon "70 85 90" "20 30 20" "maroon"`



`star x y sides inner outer [color] [op]`



`star 20 20 5 2 6`



`star 50 20 12 2 5 "maroon"`



`star 80 ey 24 2 8 "maroon" 20`

Images

Image	<code>image</code>	<code>"file" x y w h [scale] [link]</code>
Captioned image	<code>cimage</code>	<code>"file" "caption" x y w h [scale] [link]</code>

Note: the scale value is a percentage from 1-100

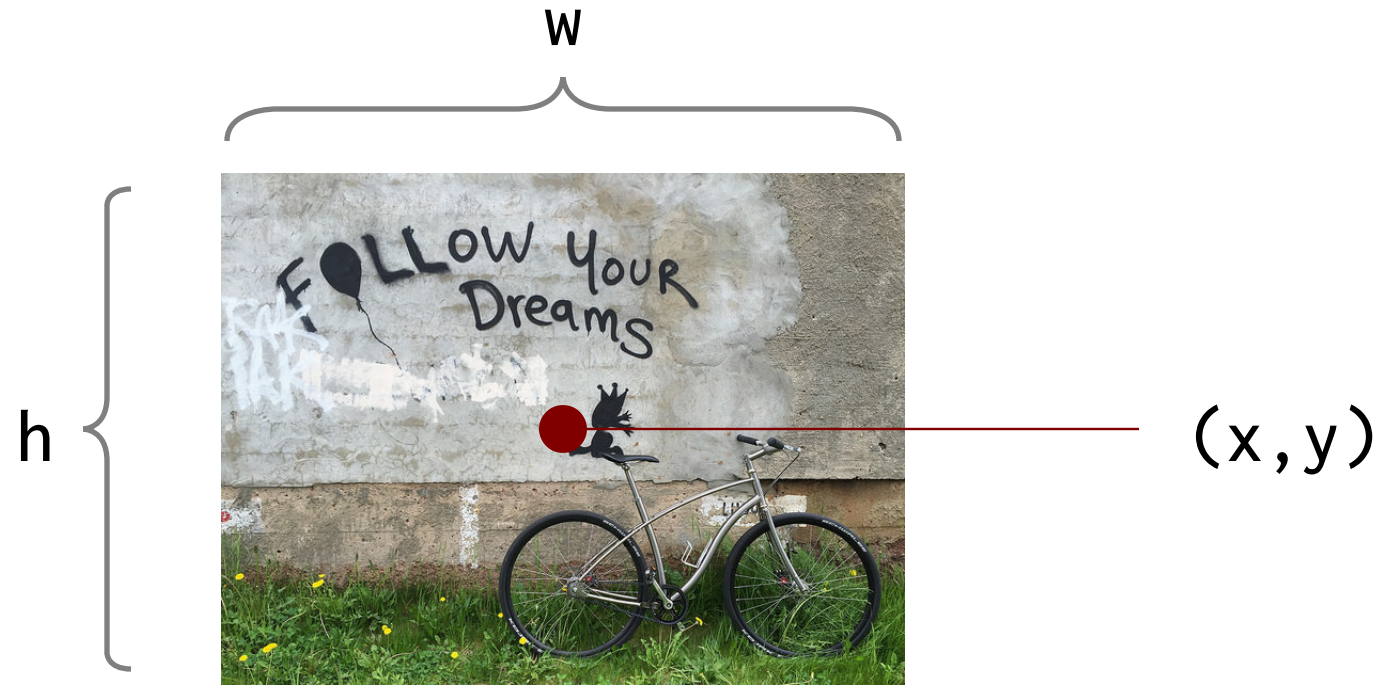


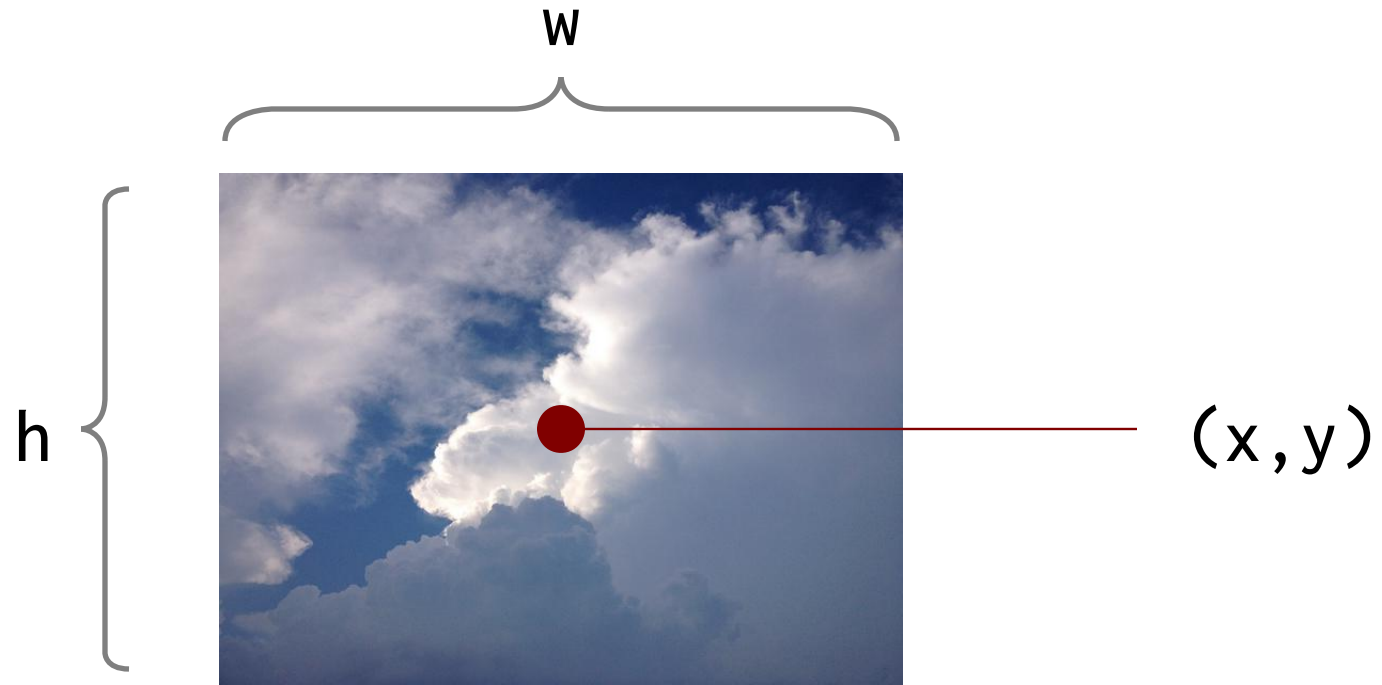
image "file" x y w h [scale] [link]



image "follow.jpg" 20 25 640 480 10

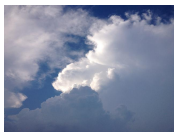


image "follow.jpg" 75 25 640 480 30



sky

`cimage "file" "caption" x y w h [scale] [link] [capsize]`



sky



sky

`cimage "cloudy.jpg" "sky" 20 25 640 480 10`

`cimage "cloudy.jpg" "sky" 75 25 640 480 30 "" 1.5`

Lists

Plain list	<code>list</code>	<code>x y fontsize [font] [color] [op] [spacing]</code>
Bullet list	<code>blist</code>	<code>x y fontsize [font] [color] [op] [spacing]</code>
Numbered list	<code>nlist</code>	<code>x y fontsize [font] [color] [op] [spacing]</code>
Centered list	<code>clist</code>	<code>x y fontsize [font] [color] [op] [spacing]</code>

```
list
(x,y) li "first"
      li "second"
      li "third"
elist
```

`list x y fontsize [font] [color] [op] [spacing]`

```
list 20 30 2.5 one
      li "one"
      li "two" two
      li "three" three
elist
```

```
list 85 30 4 "serif" "maroon" 100 1.0
      li "one"
      li "two"
      li "three"
elist
```

one
two
three

```
    blist
(x,y)  li "first"
        li "second"
        li "third"
    elist
```

`blist x y fontsize [font] [color] [op] [spacing]`

```
blist 20 30 2.5 ● one
    li "one"
    li "two"    ● two
    li "three"  ● three
elist
```

```
blist 85 30 4 "serif" "maroon" 100 1.0
    li "one"
    li "two"
    li "three"
elist
```

● *one*
● *two*
● *three*

```
nlist
(x,y) li "first"
      li "second"
      li "third"
elist
```

`nlist x y fontsize [font] [color] [op] [spacing]`

```
nlist 20 30 2.5 1. one
      li "one"
      li "two"  2. two
      li "three" 3. three
elist
```

```
nlist 85 30 4 "serif" "maroon" 100 1.0
      li "one"
      li "two"
      li "three"
elist
```

1. one
2. two
3. three

```
clist
(x,y) li "first"
      li "second"
      li "third"
elist
```

`clist x y fontsize [font] [color] [op] [spacing]`

```
clist 35 30 2.5
  li "first one"
  li "next"
  li "and last"
elist
```

first one
next
and last

```
clist 90 30 4 "serif" "maroon" 100 1.0
  li "first"
  li "next"
  li "and last"
elist
```

first
next
and last

Arrows

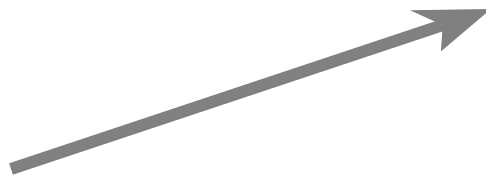
Straight	<code>arrow</code>	<code>x1 y1 x2 y2 [lw] [aw] [ah] [color] [op]</code>
Left curved	<code>lcarrow</code>	<code>bx by cx cy ex ey [lw] [aw] [ah] [color] [op]</code>
Right curved	<code>rcarrow</code>	<code>bx by cx cy ex ey [lw] [aw] [ah] [color] [op]</code>
Up curved	<code>ucarrow</code>	<code>bx by cx cy ex ey [lw] [aw] [ah] [color] [op]</code>
Down curved	<code>dcarrow</code>	<code>bx by cx cy ex ey [lw] [aw] [ah] [color] [op]</code>



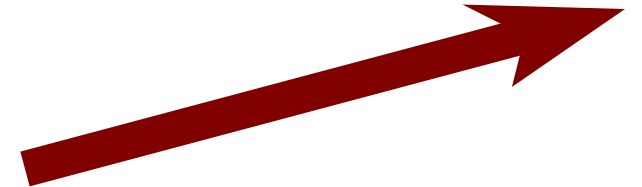
`arrow x1 y1 x2 y2 [lw] [aw] [ah] [color] [op]`



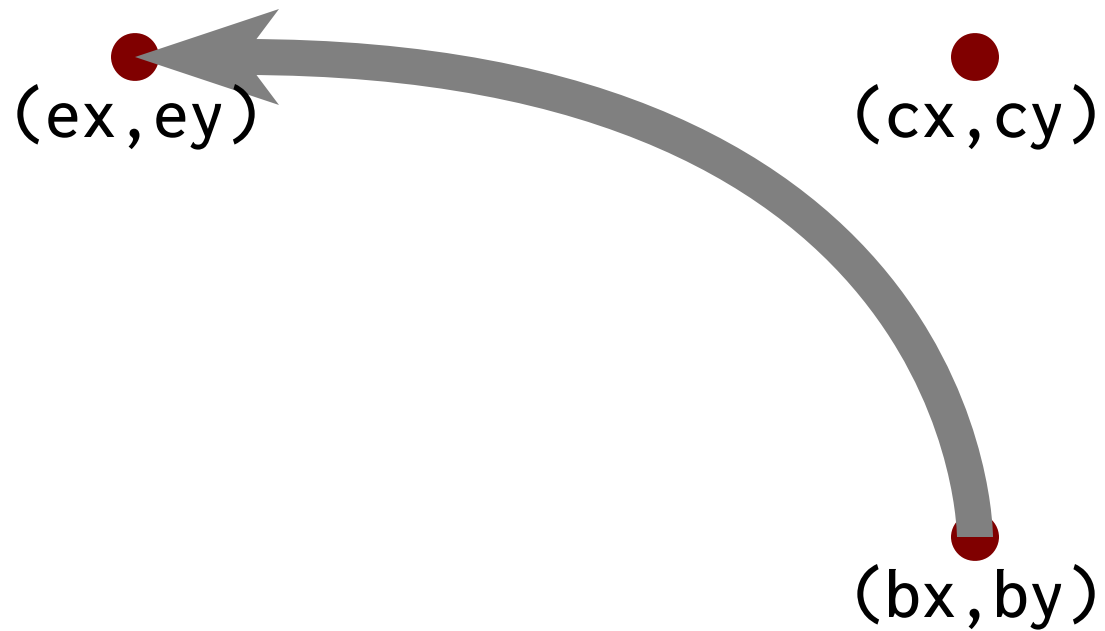
`arrow 10 20 30 20`



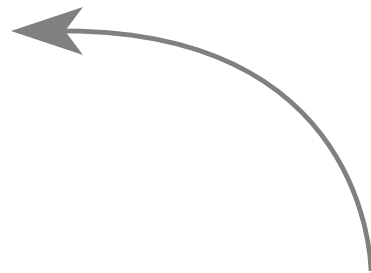
`arrow 40 20 60 30 0.5`



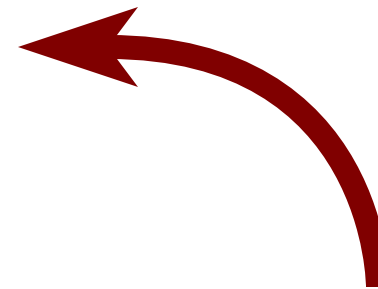
`arrow 70 20 95 30 1.5 6 6 "maroon"`



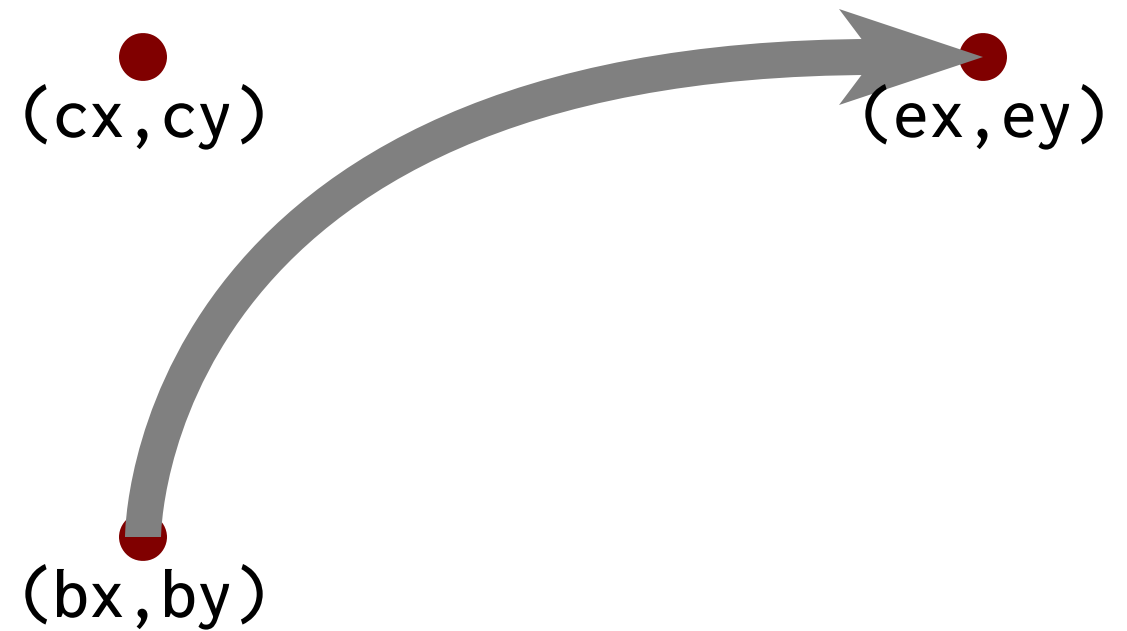
`lcarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]`



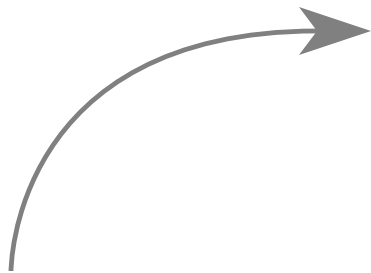
`lcarrow 30 20 30 35 15 35`



`lcarrow 70 20 70 35 55 35 1 5 5 "maroon"`



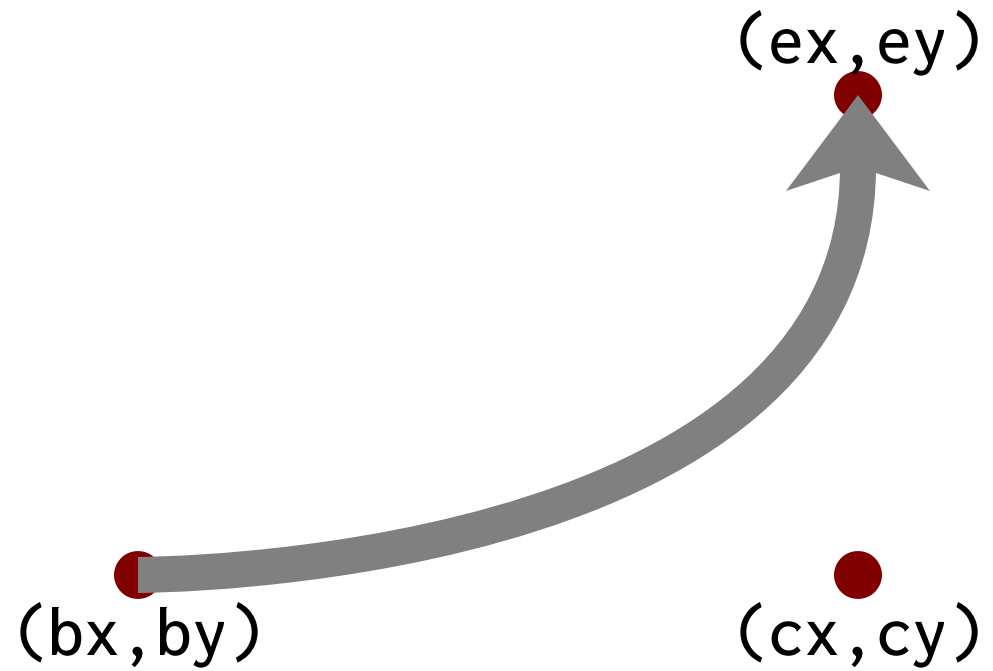
`rcarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]`



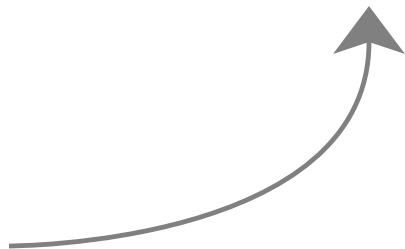
`rcarrow 15 20 15 35 30 35`



`rcarrow 50 20 50 35 70 35 1 5 5 "maroon"`



`ucarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]`



`ucarrow 15 20 30 20 30 35`



`rcarrow 50 20 70 20 70 35 1 5 5 "maroon"`

(bx,by)

(cx,cy)

(ex,ey)

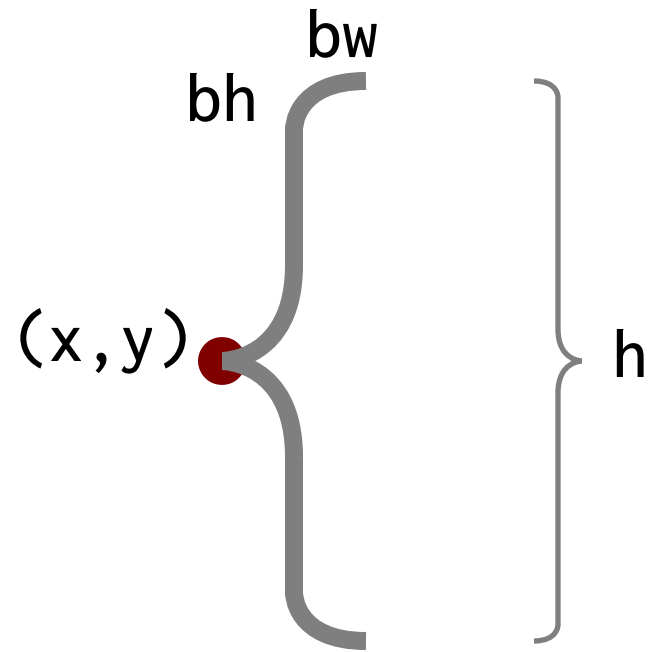
dcarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]

dcarrow 15 35 30 30 20

dcarrow 50 35 70 35 70 20 1 5 5 "maroon"

Braces

Left brace	lbrace	x y fontsize bw bh [lw] [color] [op]
Right brace	rbrace	x y fontsize bw bh [lw] [color] [op]
Up brace	ubrace	x y fontsize bw bh [lw] [color] [op]
Down brace	dbrace	x y fontsize bw bh [lw] [color] [op]



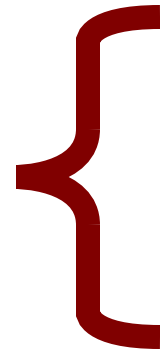
`lbrace x y h bw bh [lw] [color] [op]`



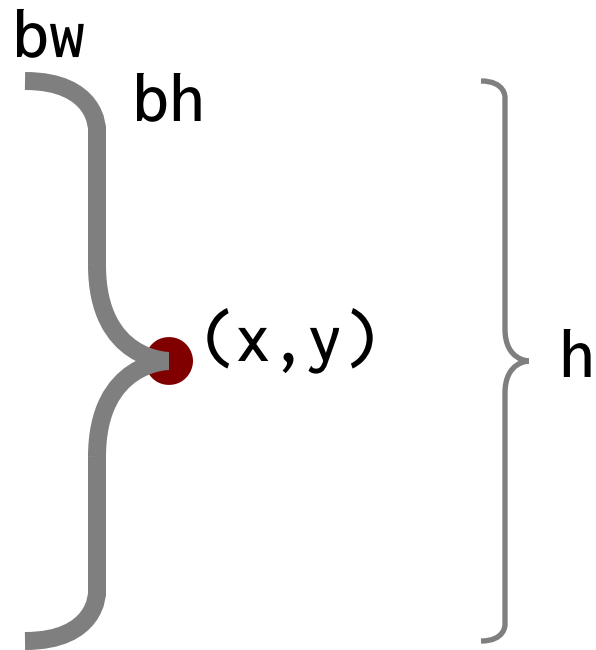
`lbrace 20 25 20 2 2`



`lbrace 50 25 20 4 4 1`



`lbrace 80 25 20 6 3 1 "maroon"`



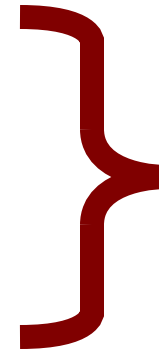
`rbrace x y h bw bh [lw] [color] [op]`



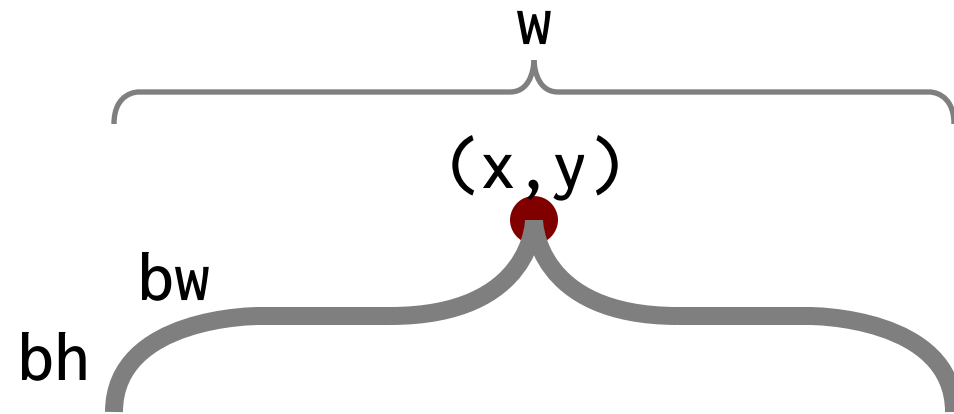
`rbrace 20 25 20 2 2`



`rbrace 50 25 20 4 4 1`



`rbrace 80 25 20 6 3 1 "maroon"`



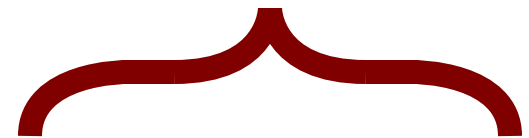
`ubrace x y w bw bh [lw] [color] [op]`



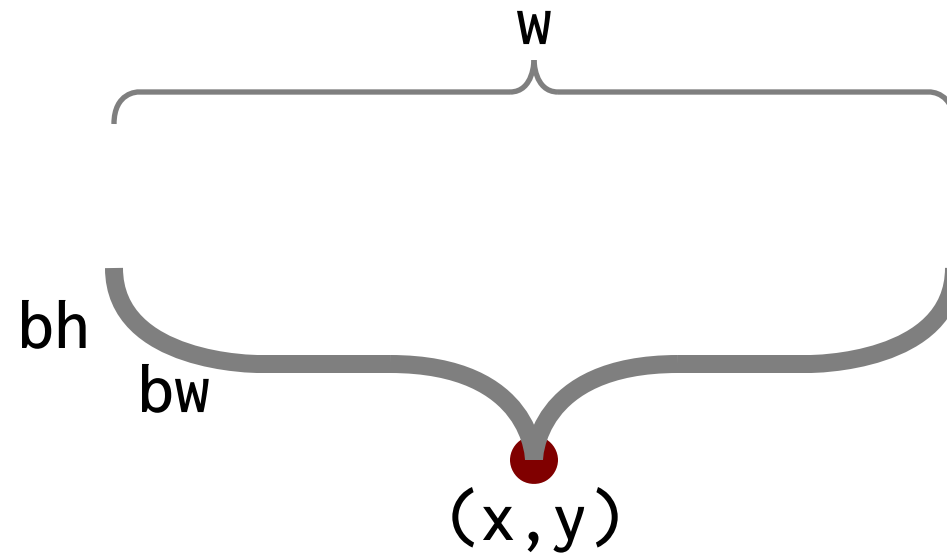
`ubrace 20 25 20 2 2`



`ubrace 50 25 20 4 4 1`



`ubrace 80 25 20 4 4 1 "maroon"`



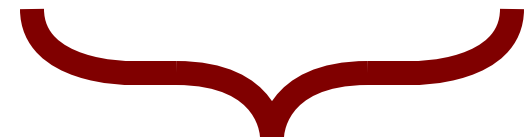
`dbrace x y w bw bh [lw] [color] [op]`



`dbrace 20 25 20 2 2`



`dbrace 50 25 20 4 4 1`



`dbrace 80 25 20 4 4 1 "maroon"`

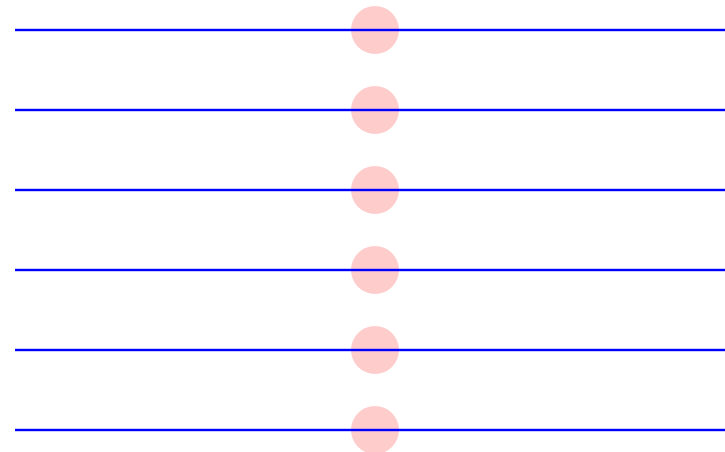
Loop, Assignments, Data and Grid

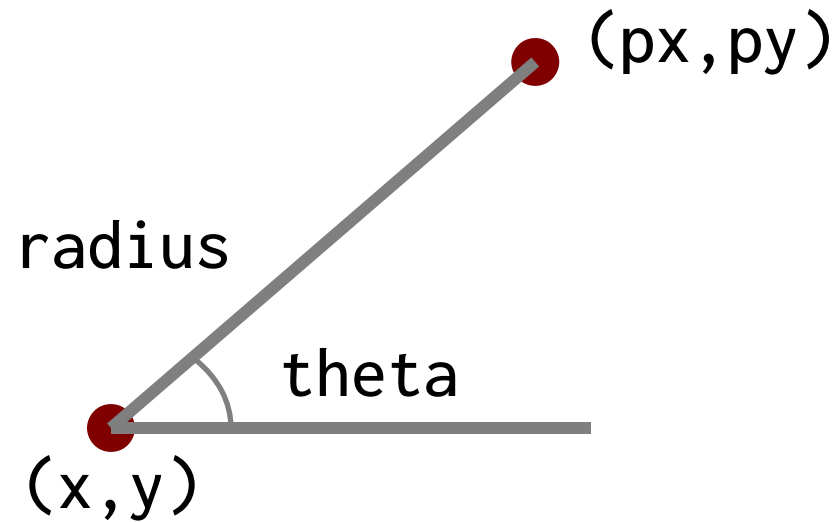
Loop	<code>for v=</code>	<code>begin end [increment] ... efor</code>
Polar coordinate (x)	<code>x=polarx</code>	<code>x y radius angle</code>
Polar coordinate (y)	<code>y=polary</code>	<code>x y radius angle</code>
Area	<code>value=area</code>	<code>expression</code>
Formatted text	<code>value=format</code>	<code>fmt expression</code>
Random number	<code>value=random</code>	<code>min max</code>
Value mapping	<code>value=vmap</code>	<code>data min1 max1 min2 max2</code>
In-line data	<code>data</code>	<code>"file" ... edata</code>
Objects on a grid	<code>grid</code>	<code>grid "file" x y hspace vspace edge</code>

```
for v=begin end [increment]  
...items to repeat using v  
efor
```

```
for v=begin end [increment]...efor
```

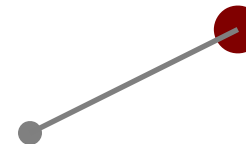
```
for v=10 35 5  
  hline 50 v 30 0.1 "blue"  
  circle 65 v 2 "red" 20  
efor
```





`px=polarx x y radius theta`
`py=polary x y radius theta`

```
cpx=60
cpy=20
px1=polarx cpx cpy 10 30
py1=polary cpx cpy 10 30
line cpx cpy px1 py1
circle cpx cpy 1 "gray"
circle px1 py1 2 "maroon"
```



v=123.45

a=area v



area



original value

value=area expression

m1=100

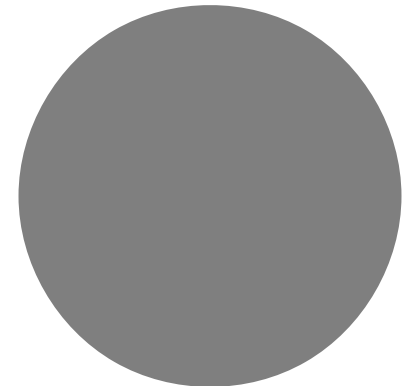
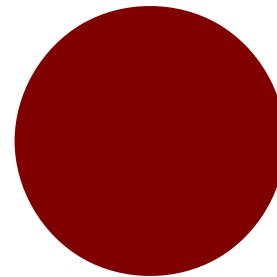
m2=200

a1=area m1

a2=area m2

circle 60 20 a1 "maroon"

circle 80 20 a2



x=3.14159

y=2.0

title=format "Value=%.2f" x*y
Value=6.28 format string expression

value=format fmt expression

v1=100.3

v2=200.234

title=format "%.2f Million (USD)" v1

subtitle=format "Total value: %.2f" v1+v2

ctext title 80 30 4 "sans" "maroon"

ctext subtitle 80 20 3 "sans" "gray"

100.30 Million (USD)

Total value: 300.53



value=random min max



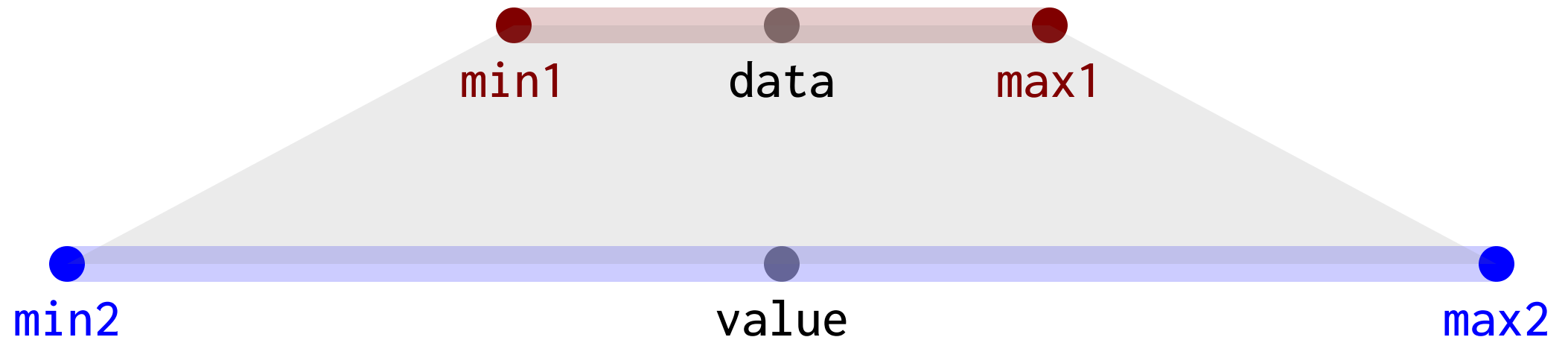
```
rx1=random 5 30  
ry1=random 15 35  
circle rx1 ry1 3 "maroon"
```



```
rx2=random 40 60  
ry2=random 15 35  
circle rx2 ry2 3 "green"
```



```
rx1=random 75 95  
ry1=random 15 35  
circle rx3 ry3 3 "blue"
```



value=vmap data min1 max1 min2 max2

```
yrmin=1776
yrmax=2021
smin=60
smax=90
vp=vmap 1945 yrmin yrmax smin smax
line smin 20 smax 20 0.5 "gray" 20
circle smin 20 1
circle smax 20 1
circle vp 20 2 "maroon"
```



```
data "file.d" ← data file
first 20
second 100
third 200
edata
```

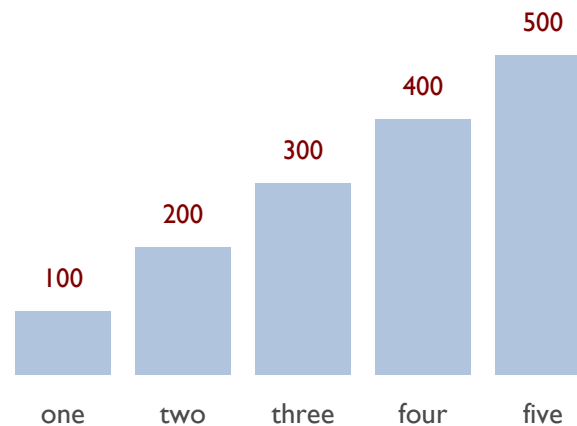
} data values

```
data "filename" ... edata
```

```
data "test.d"
  one 100
  two 200
  three 300
  four 400
  five 500
```

```
edata
```

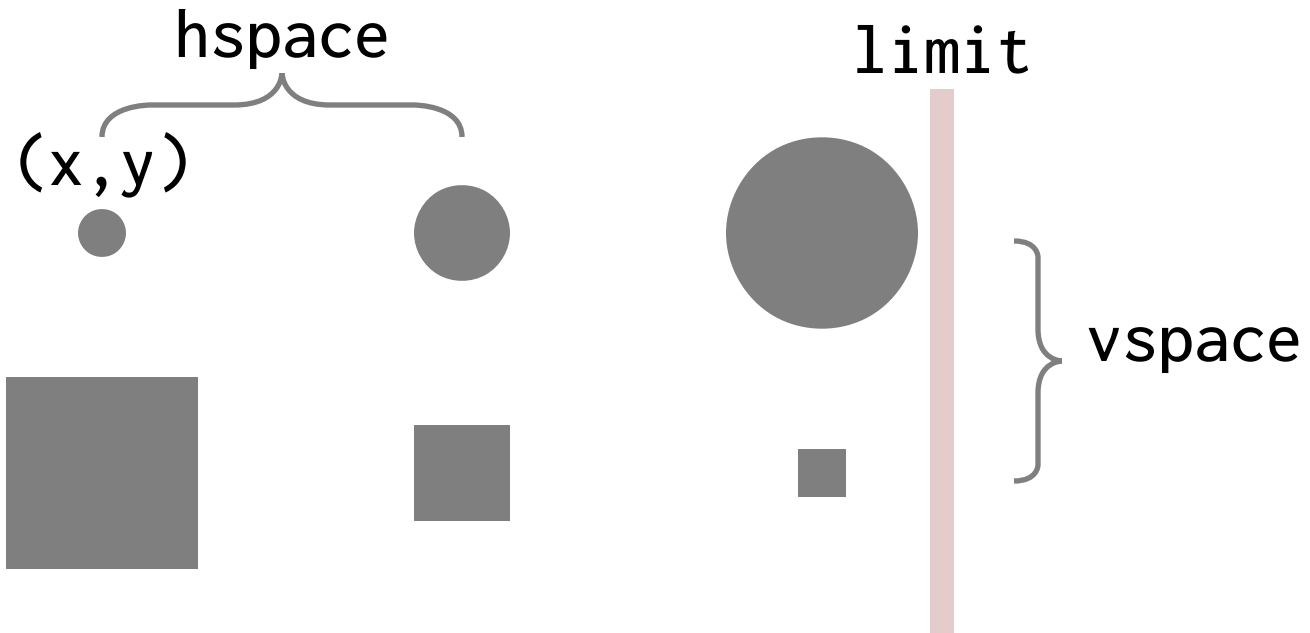
```
dchart -bar -left 50 -bottom 15 -right 70 -top 35 "test.d"
```



file

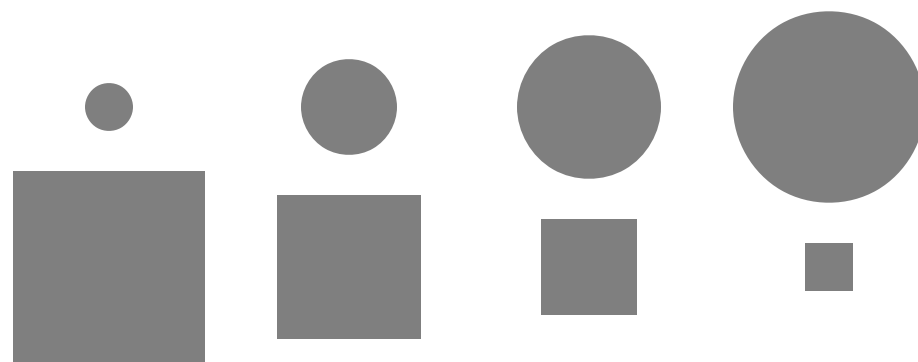


```
circle x y 2
circle x y 4
circle x y 8
square x y 8
square x y 4
square x y 2
```



grid "file" x y hspace vspace limit

```
circle x y 2
circle x y 4
circle x y 6
circle x y 8
square x y 8
square x y 6
square x y 4
square x y 2
```



grid "code/grid-ex.dsh" 35 33 10 10 65

Charts

Charts

`dchart`

options "file" (see next page)

Chart Legends

`legend`

"text" x y size font color

Chart Types

-bar	true	bar chart
-wbar	false	word bar chart
-hbar	false	horizontal bar chart
-donut	false	donut chart
-dot	false	dot chart
-lego	false	lego chart
-line	false	line chart
-pgrid	false	proportional grid
-pmap	false	proportional map
-bowtie	false	bowtie chart
-fan	false	fan chart
-radial	false	radial chart
-scatter	false	scatter chart
-slope	false	slope chart
-vol	false	volume (area) chart

Chart Elements

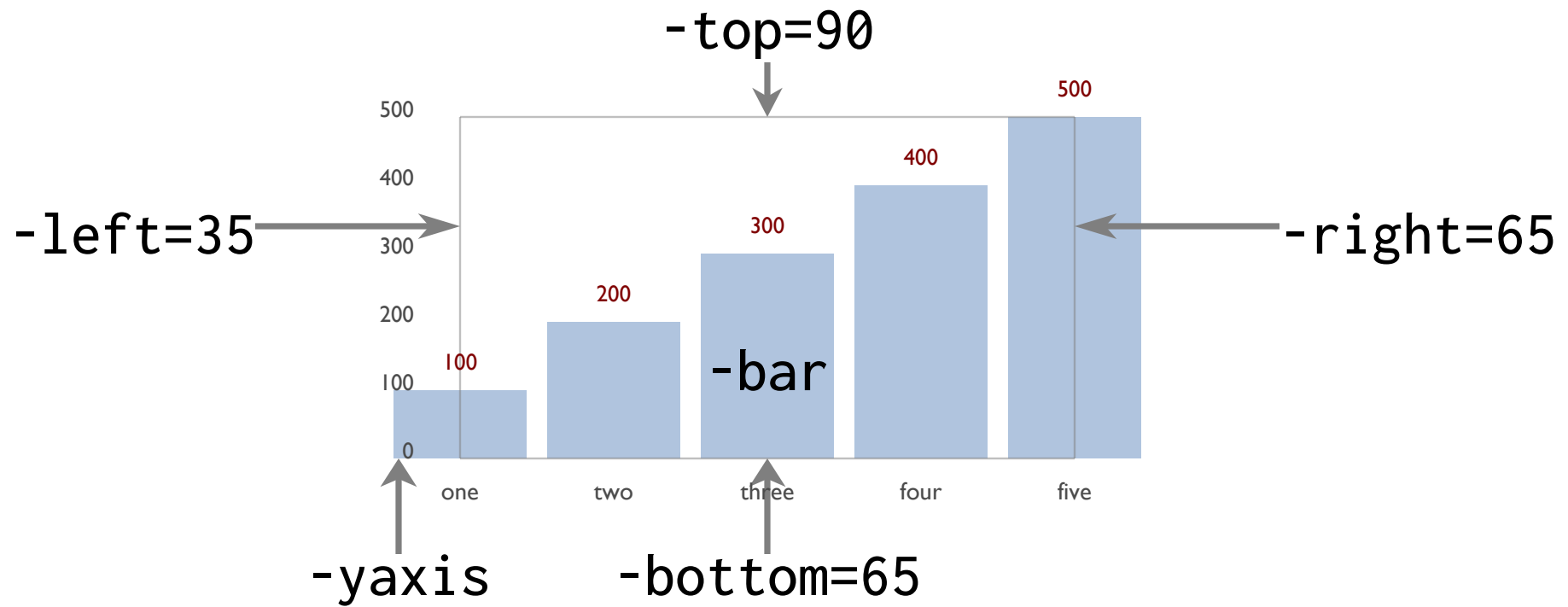
-csv	false	read CSV files
-frame	false	show a colored frame
-fulldeck	true	generate full deck markup
-grid	false	show gridlines on the y axis
-note	true	show annotations
-pct	false	show computed percentage
-rline	false	show a regression line
-solidpmap	false	show solid pmap colors
-spokes	false	show spokes in radial chart
-title	true	show the title
-val	true	show values
-xlast	false	show the last x label
-xstagger	false	stagger x axis labels
-yaxis	false	show a y axis
-chartitle	override title in data	specify the title
-datacond	low,high,color	conditional data colors
-hline	value,label	label horizontal line at value
-valpos	t=top, b=bottom, m=middle	value position
-xlabel	default=1, 0 to suppress	x axis label interval
-yrange	min,max.step	specify the y axis label range

Position and Scaling

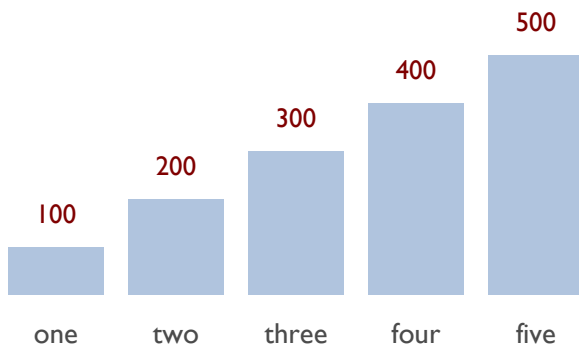
-top	80	top of the chart
-bottom	30	bottom of the chart
-left	20	left margin
-right	80	right margin
-min	data min	set the minimum data value
-max	data max	set the maximum data value

Measures and Attributes

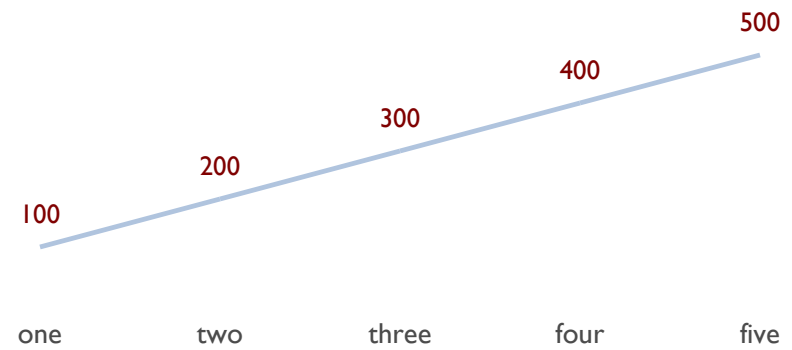
-bgcolor	white	background color
-barwidth	computed from data size	barwidth
-color	lightsteelblue	data color
-csvcol	label1,label2	specify csv columns
-datafmt	%.1f	data format for values
-dmin	false	use data minimum, not zero
-framecolor	rgb(127,127,127)	frame color
-lcolor	rgb(75,75,75)	label color
-linewidth	0.2	linewidth
-ls	2.4	linespacing
-noteloc	c=center, r=right, l=left	annotation location
-pmlen	20	pmap label length
-psize	30	diameter of the donut
-pwidth	3	width of the donut or pmap
-rlcolor	rgb(127,0,0)	regression line color
-textsize	1.5	text size
-xlabrot	0	xlabel rotation (deg.)
-vcolor	rgb(127,0,0)	value color
-volop	50	volume opacity %



dchart options "file"



dchart -left=10 -right=30 -top=35 -bottom=20 "test.d"



dchart -left=55 -right=85 -top=35 -bottom=20 -bar=f -line "test.d"

● text
(x,y)

legend "text" x y size font color

● Item on the chart

● *Thing*

legend "Item on the chart" 20 30 2 "sans" "red"

legend "Thing" 70 30 1.5 "serif" "blue"