decksh
reference

Keywords and arguments

```
text   "string....." x y n          [font][color][op]
```

```
text "hello, world"  80 50 2                                    hello, world
text "hello, world"  80 40 2 "serif"                            hello, world
text "hello, world"  80 30 2 "serif" "red"                      hello, world
text "hello, world"  80 20 2 "serif" "red" 50                   hello, world
```

Keywords

Structure

deck
edeck
slide
eslide
canvas
include
grid

Text

text
ctext
etext
rtext
arctext
textblock
textfile
textcode

Lists

list
blist
nlist
clist
li
elist

Graphics and Arrows

acircle
arc
circle
curve
ellipse
hline
line
pill
polygon
rect
rrect
square
star
vline
lbrace
rbrace
ubrace
dbrace
arrow
crarrow
clarrow
cuarrow
cdarrow

Images

image
cimage

Charts

dchart
legend

Loop

for
efor

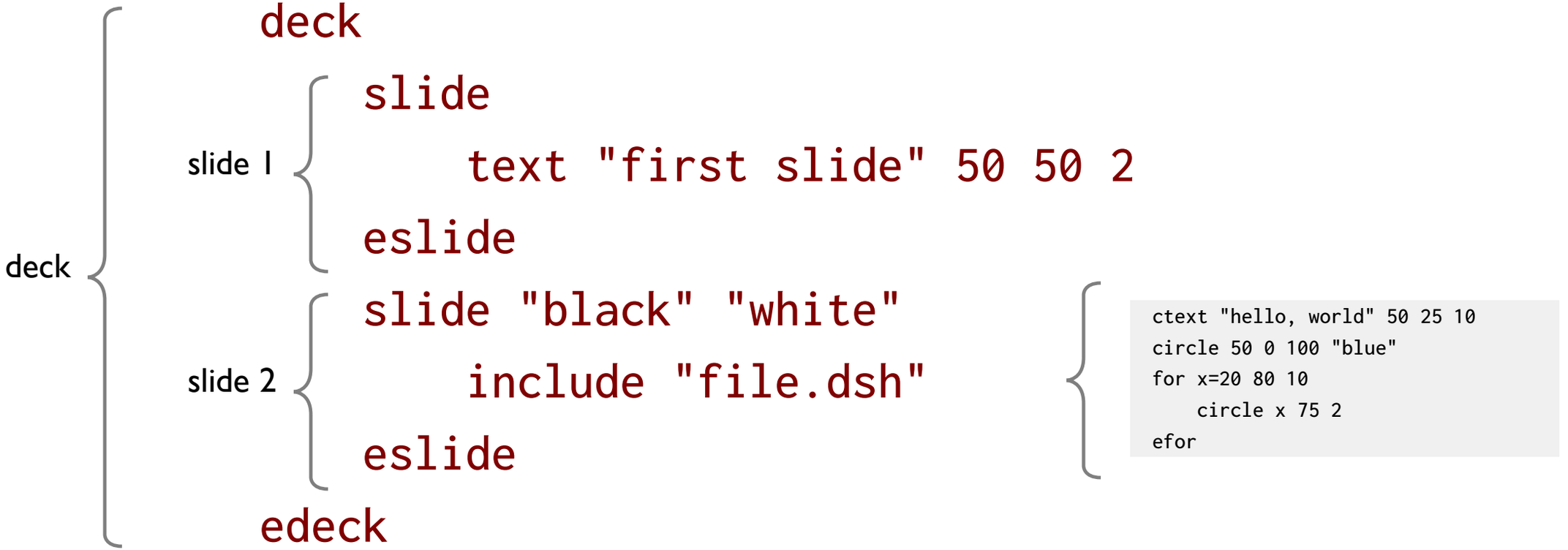
Data

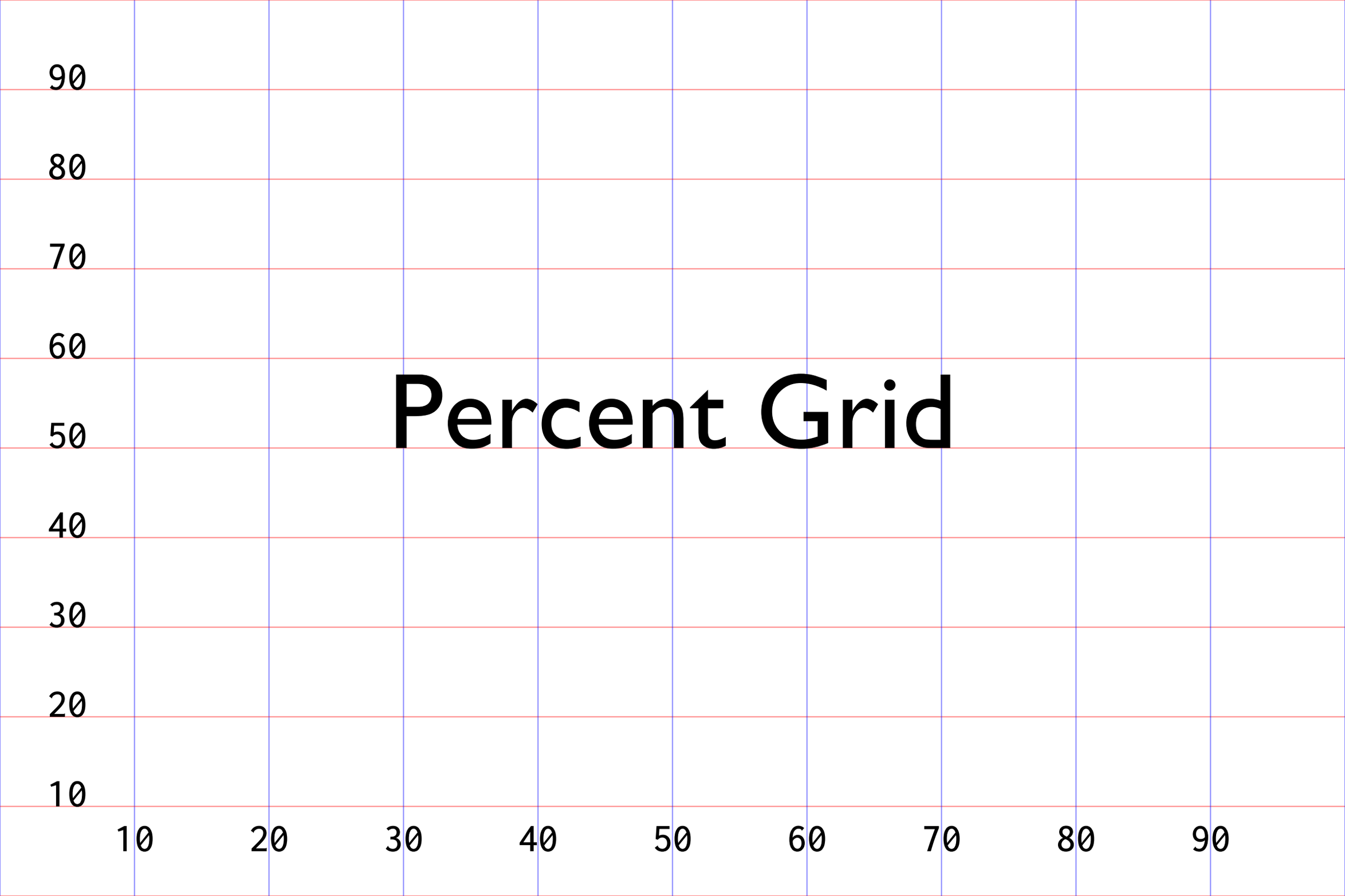
data
edata

Utility

vmap
random
polarx
polary
area
format

Structure


deck
slide 1
slide 2
deck
slide
text "first slide" 50 50 2
eslide
slide "black" "white"
include "file.dsh"
eslide
edeck
ctext "hello, world" 50 25 10
circle 50 0 100 "blue"
for x=20 80 10
circle x 75 2
efor


Percent Grid
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
70
80
90

Text

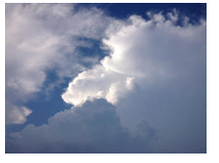
hello, world

Now is the time
for all good men
to come to the aid
of the party

what's up, Doc?

Graphics

Images



sky

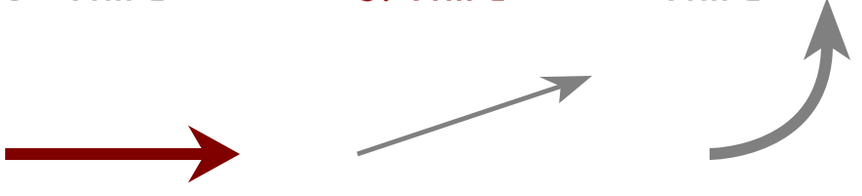
Lists

- First
- Second
- Third

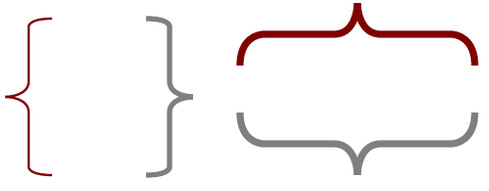
1. First
2. Second
3. Third

First
Second
Third

Arrows



Braces



Text

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]`

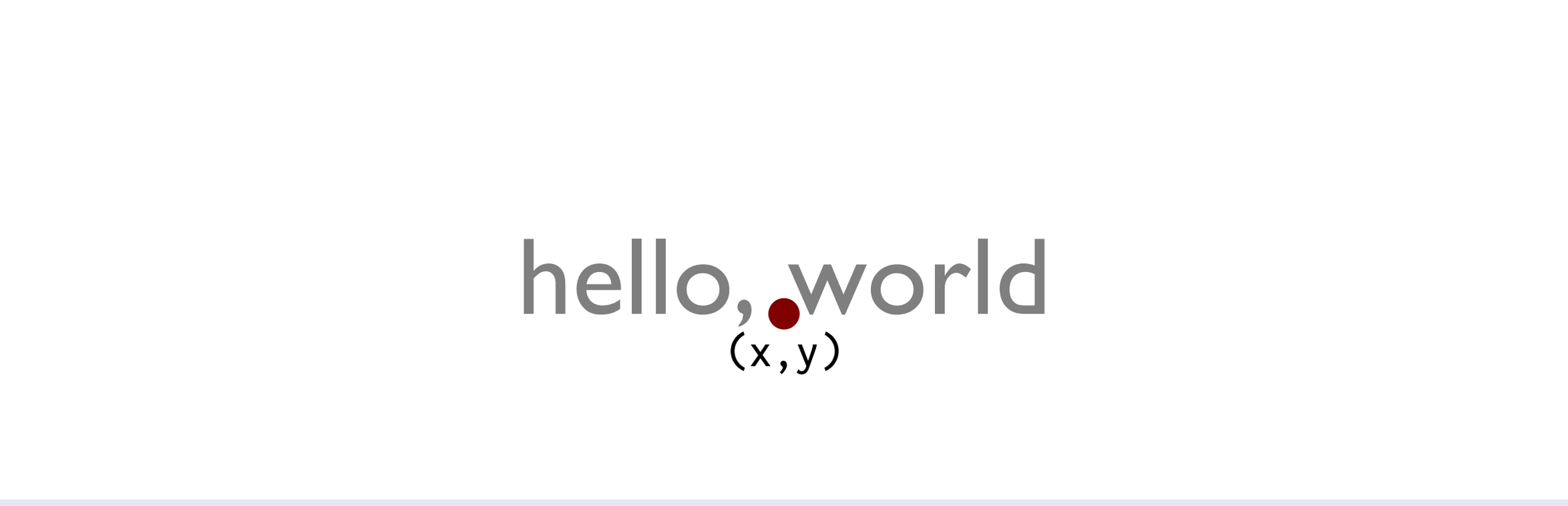

```
text "..." x y fontsize [font] [color] [op] [link]
```

abc

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

abc

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



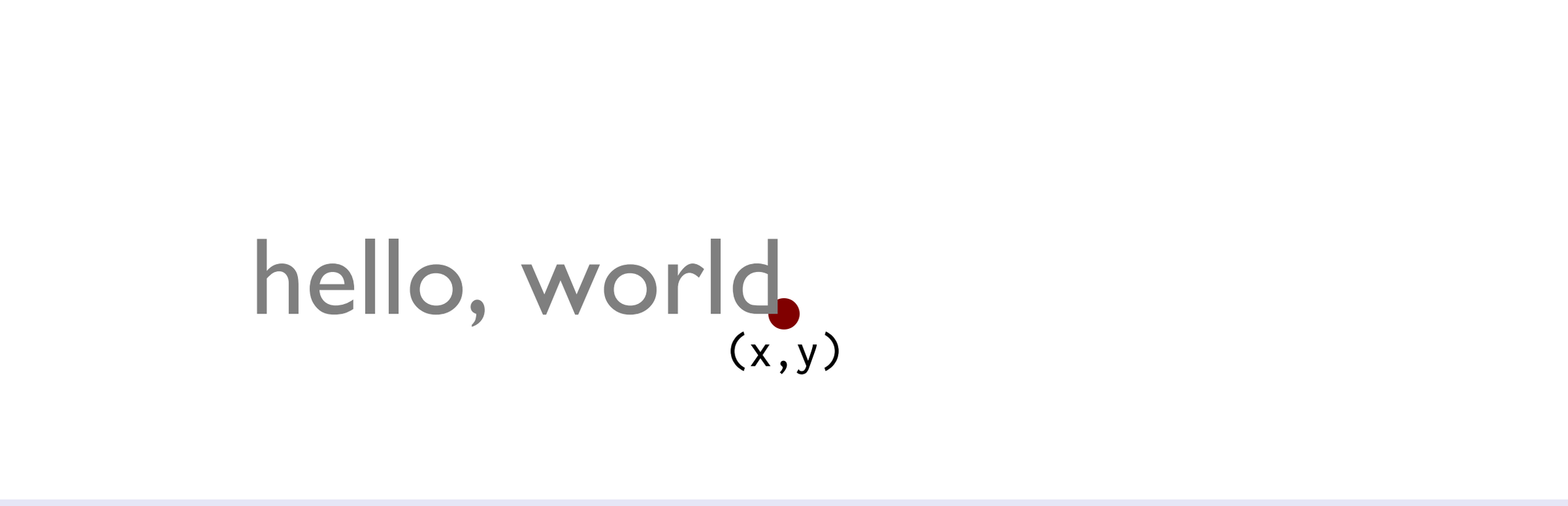

```
ctext "..." x y fontsize [font] [color] [op] [link]
```

abc

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

abc

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




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

abc

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

abc

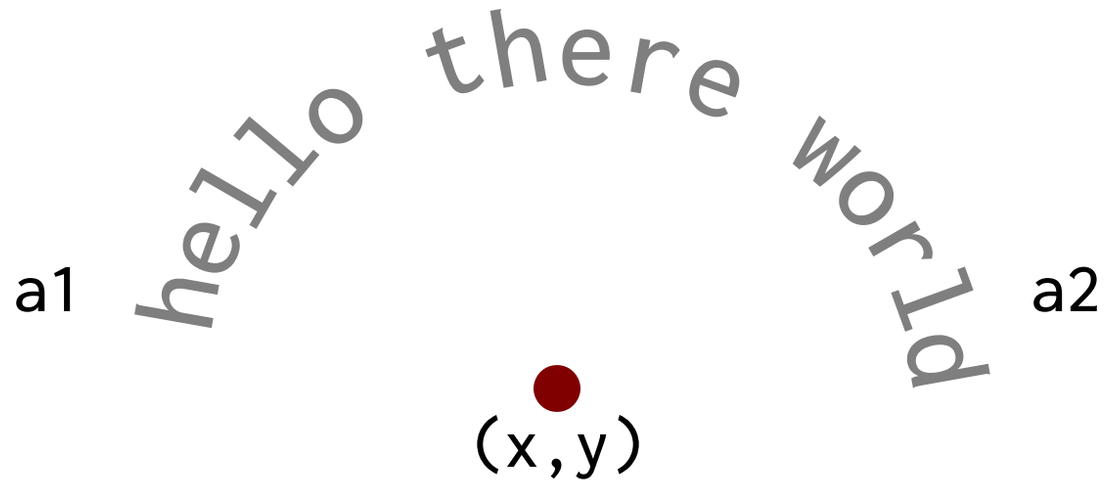
```
etext "abc" 80 20 7 "mono" "maroon"
```


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

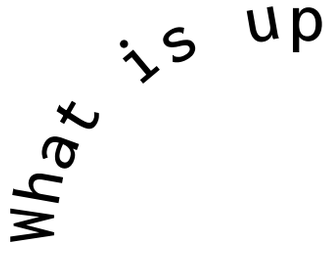

```
ctext 20 20 30 3
```


```
ctext 50 20 90 5
```

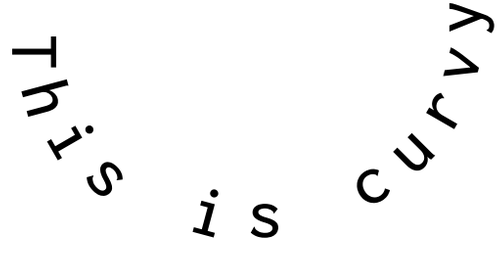

```
ctext 80 20 270 4 "sans" "maroon"
```



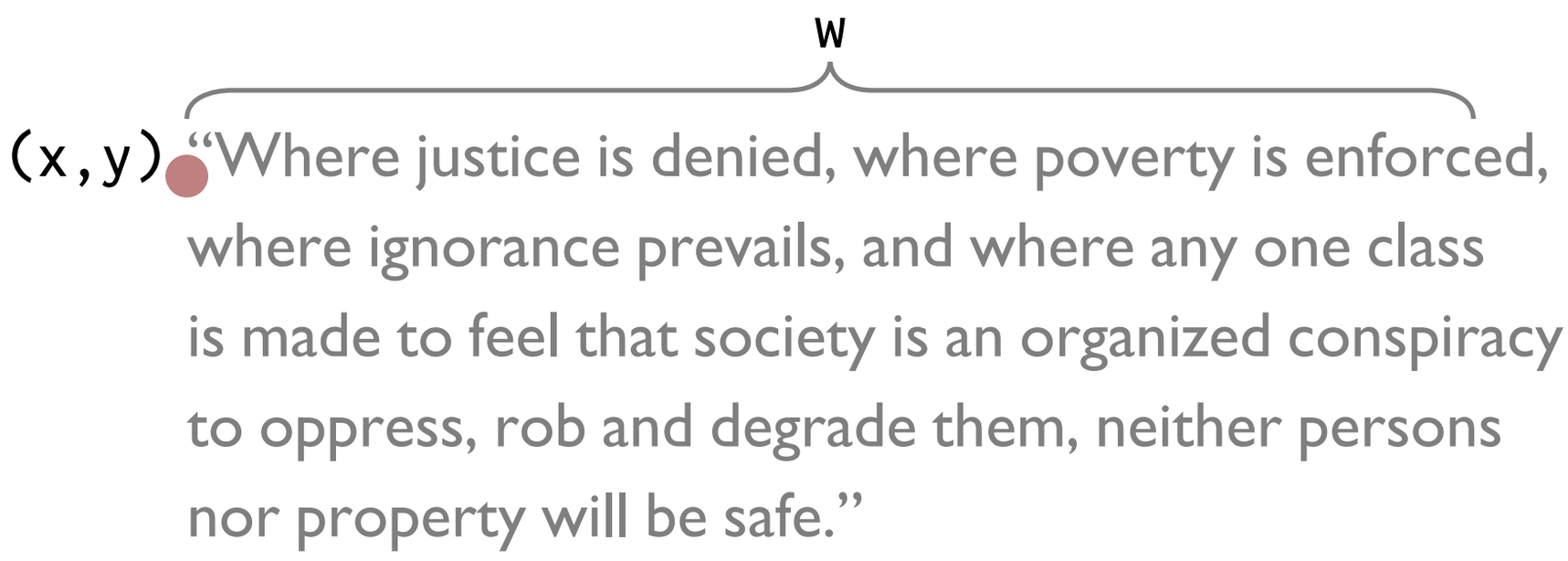

```
arctext "..." x y radius a1 a2 fontsize [font] [color] [op]
```




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




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



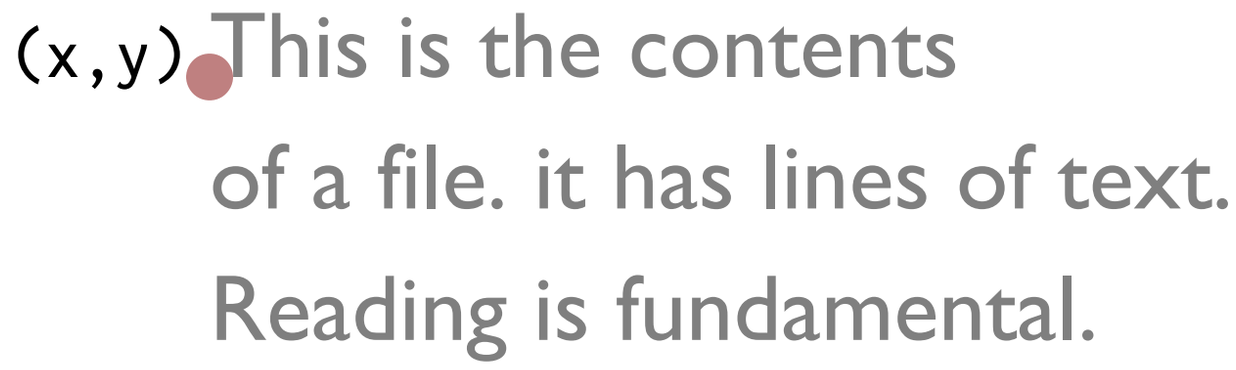

```
textblock "..." x y w fontsize [font] [color] [op]
```

“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"
```



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

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

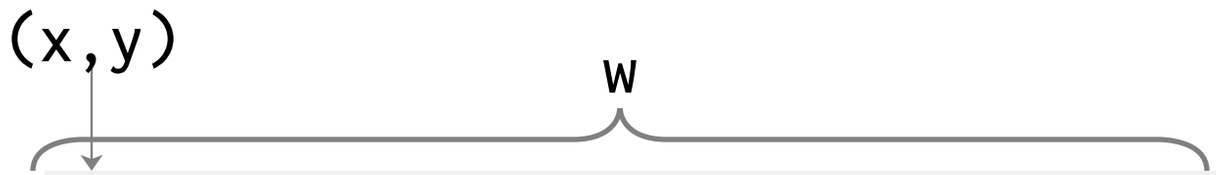
```
textfile "example.txt" 10 35 2
```

```
package main

import "fmt"

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

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




```
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")
}
```

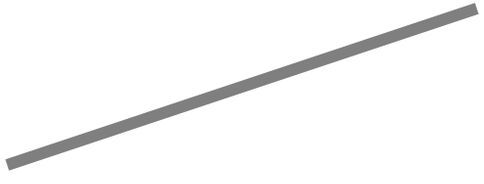
textcode "hw.go" 55 35 40 1.6 "maroon"

Graphics

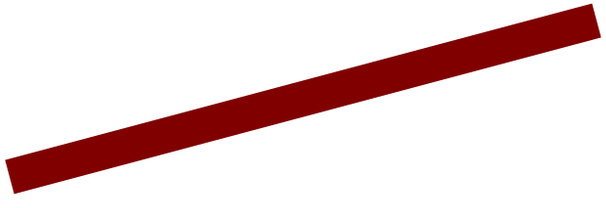
Line	`line`	`x1 y1 x2 y2 lw [color] [op]`
Horizontal line	`hline`	`x y w [lw] [color] [op]`
Vertical line	`vline`	`x y h [lw] [color] [op]`
Elliptical arc	`arc`	`x y w h a1 a2 [lw] [color] [op]`
Quadratic Bezier	`curve`	`bx by cx cy ex ey [lw] [color] [op]`
Circle	`circle`	`x y w [color] [op]`
Area circle	`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 r [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]`

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

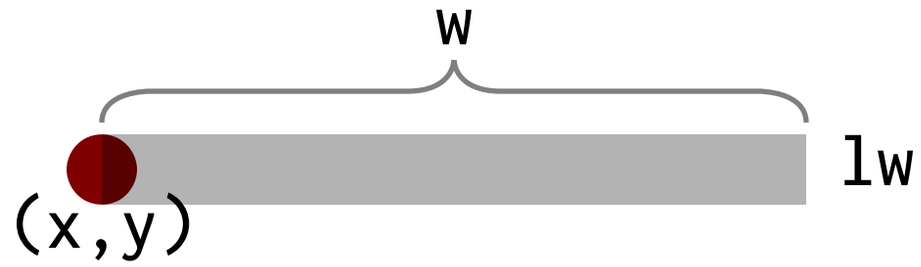
line 10 20 30 20



line 40 20 60 30 0.5



line 70 20 95 30 1.5 "maroon"

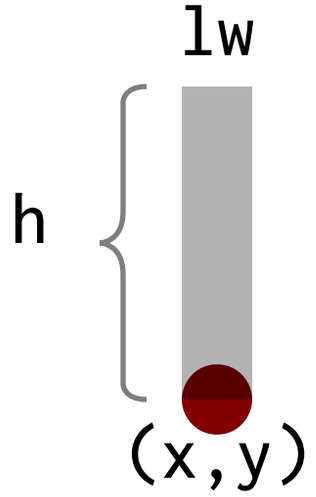


hline x y w [lw] [color] [op]

hline 15 20 10

hline 40 20 20 1

hline 70 20 20 5 "maroon" 20

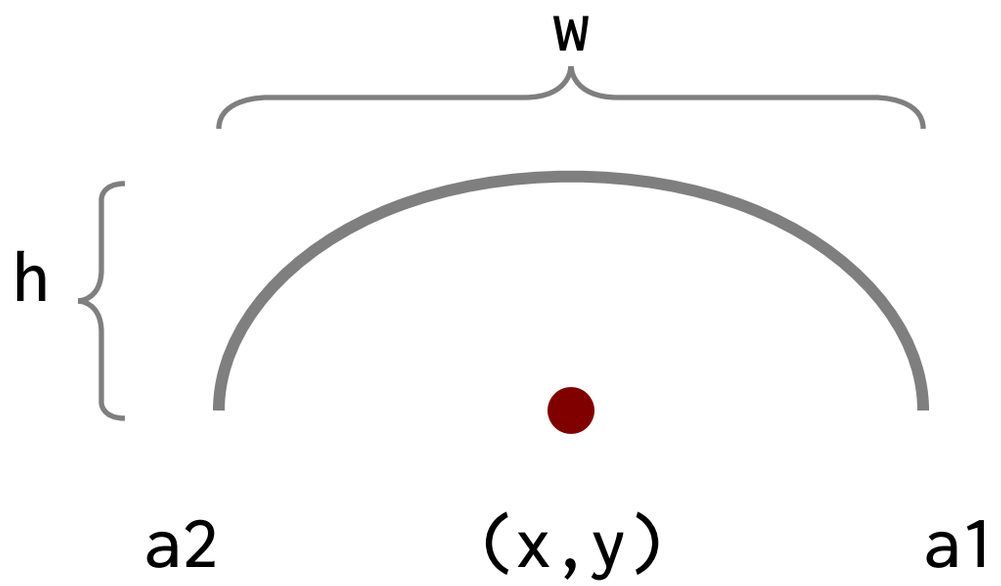


vline x y h [lw] [color] [op]

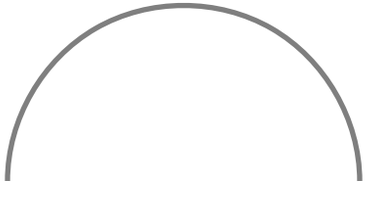
vline 20 20 15

vline 50 20 15 2

vline 80 20 15 10 "maroon" 20

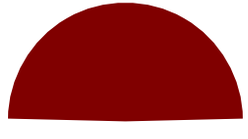



```
arc x y w h a1 a2 [lw] [color] [op]
```

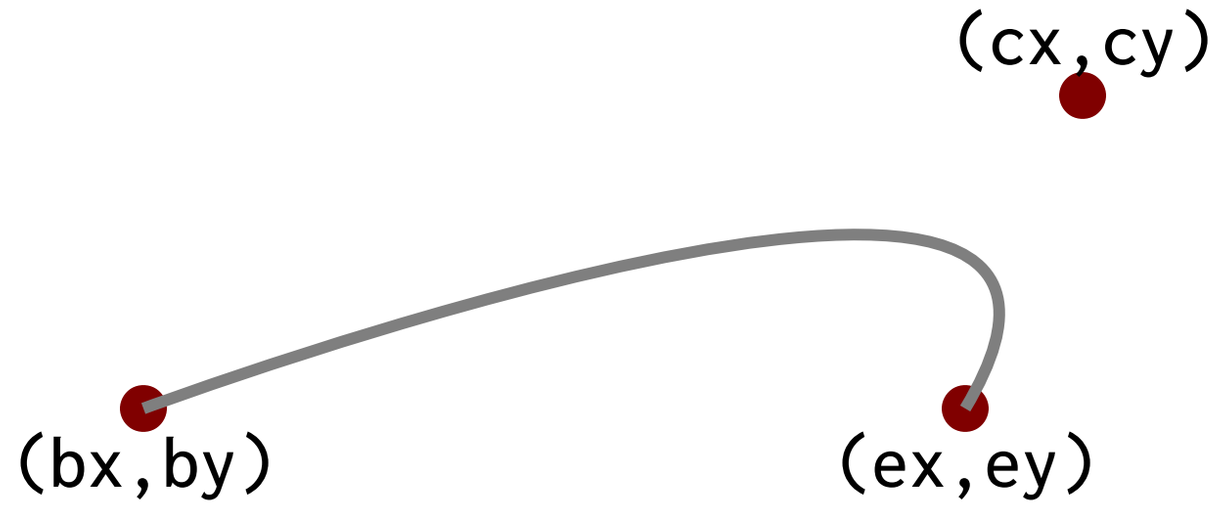


```
arc 20 20 15 15 0 180
```

```
arc 50 20 15 15 0 90 1
```



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

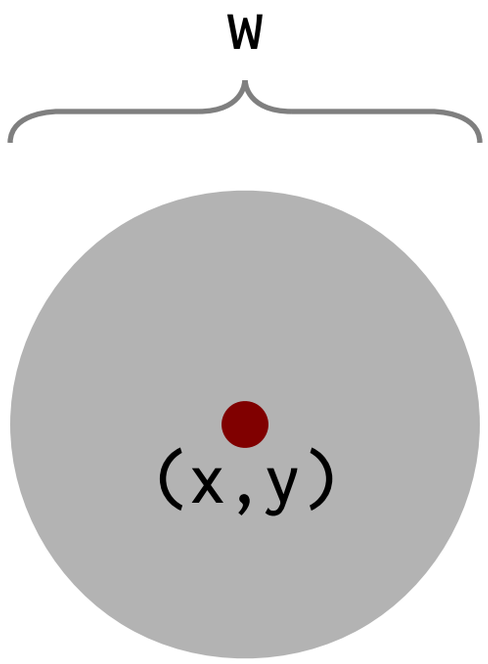


curve bx by cx cy ex ey [lw] [color] [op]

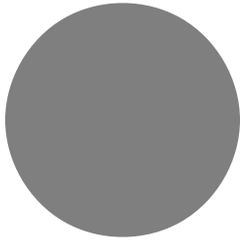
curve 15 20 25 30 30 25

curve 15 20 25 30 30 25

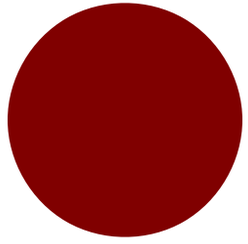
curve 70 20 70 30 90 25 0.5 "maroon"




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

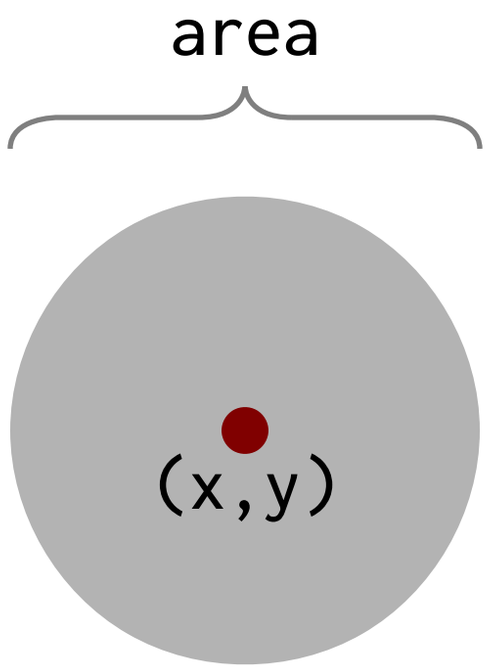


circle 20 20 10



circle 50 20 10 "maroon"

circle 80 20 5 "maroon" 20

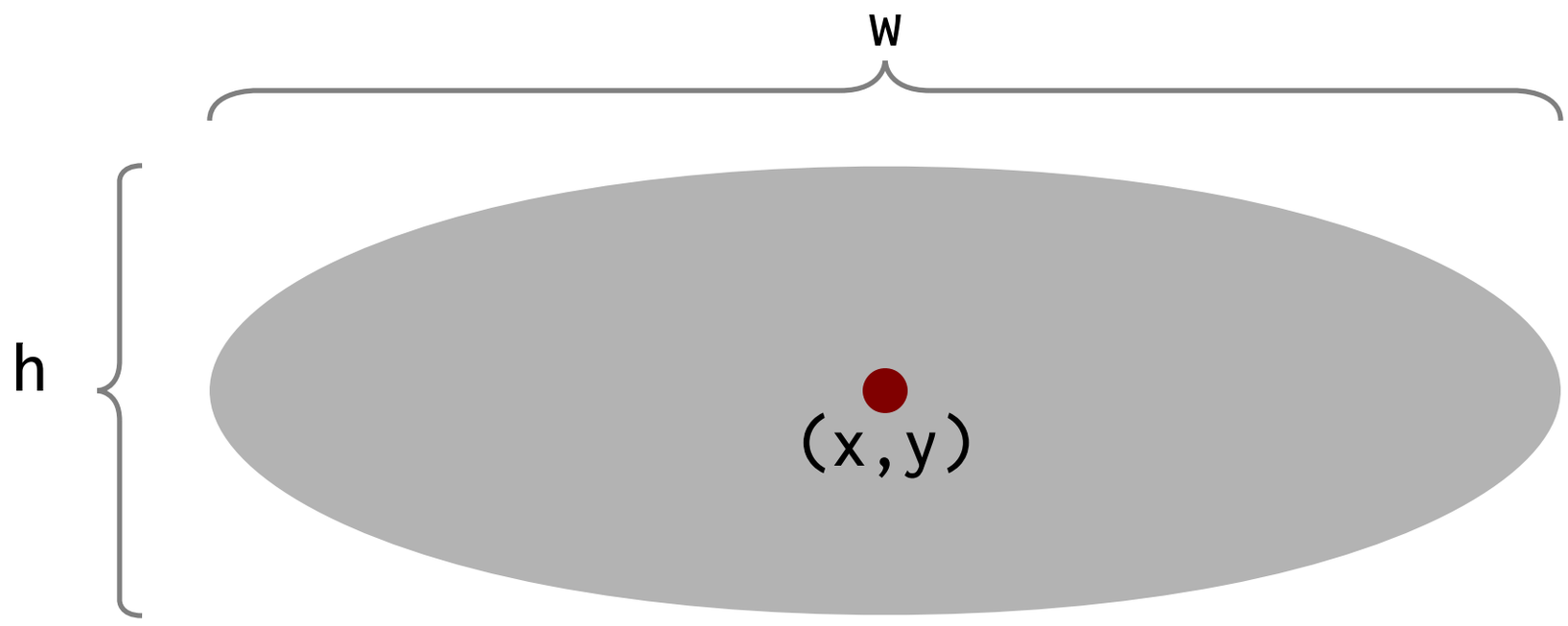


acircle x y area [color] [op]

acircle 20 20 10

acircle 50 20 10 "maroon"

acircle 80 20 5 "maroon" 20



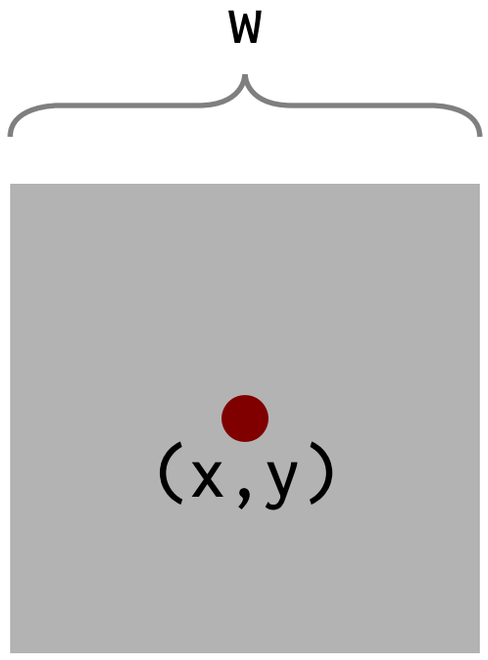

```
ellipse x y w h [color] [op]
```

```
ellipse 20 20 10 5
```

```
ellipse 50 20 10 5 "maroon"
```



```
ellipse 80 20 5 10 "maroon" 20
```

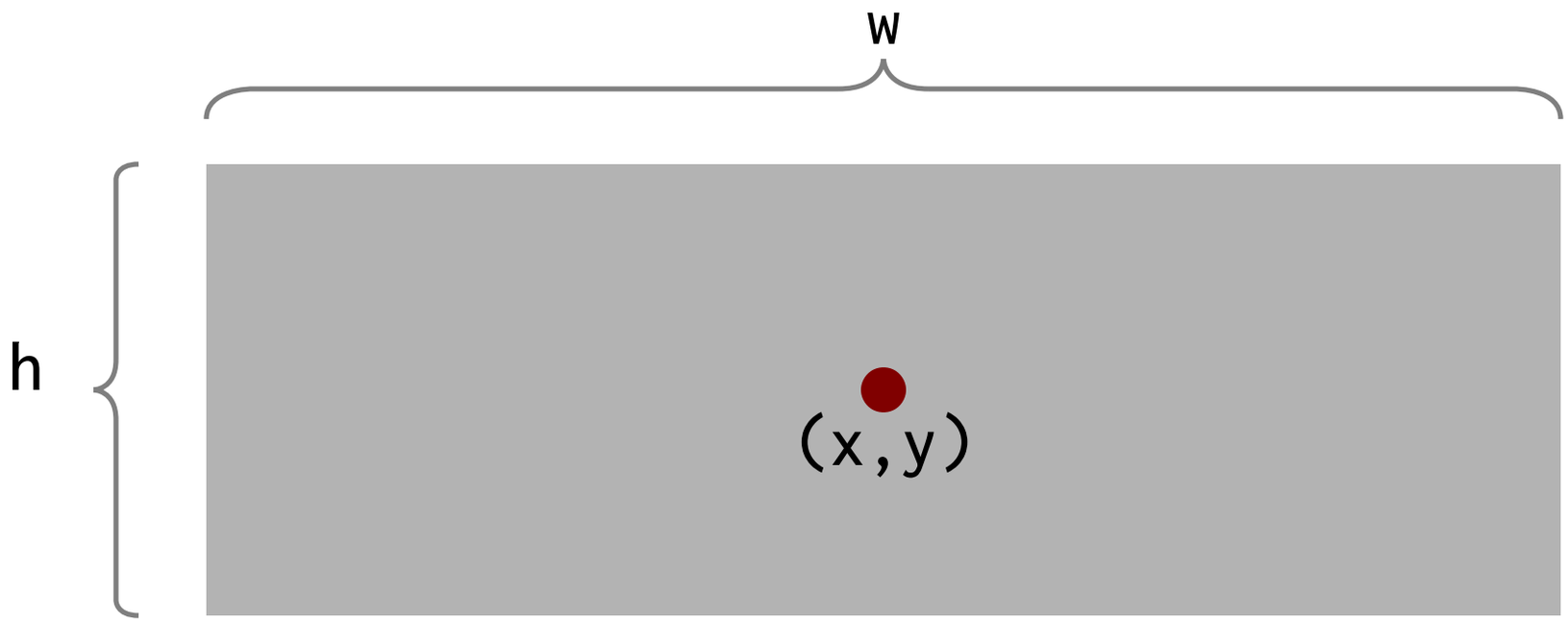


square x y w [color] [op]

square 20 20 10

square 50 20 10 "maroon"

square 80 20 5 "maroon" 20



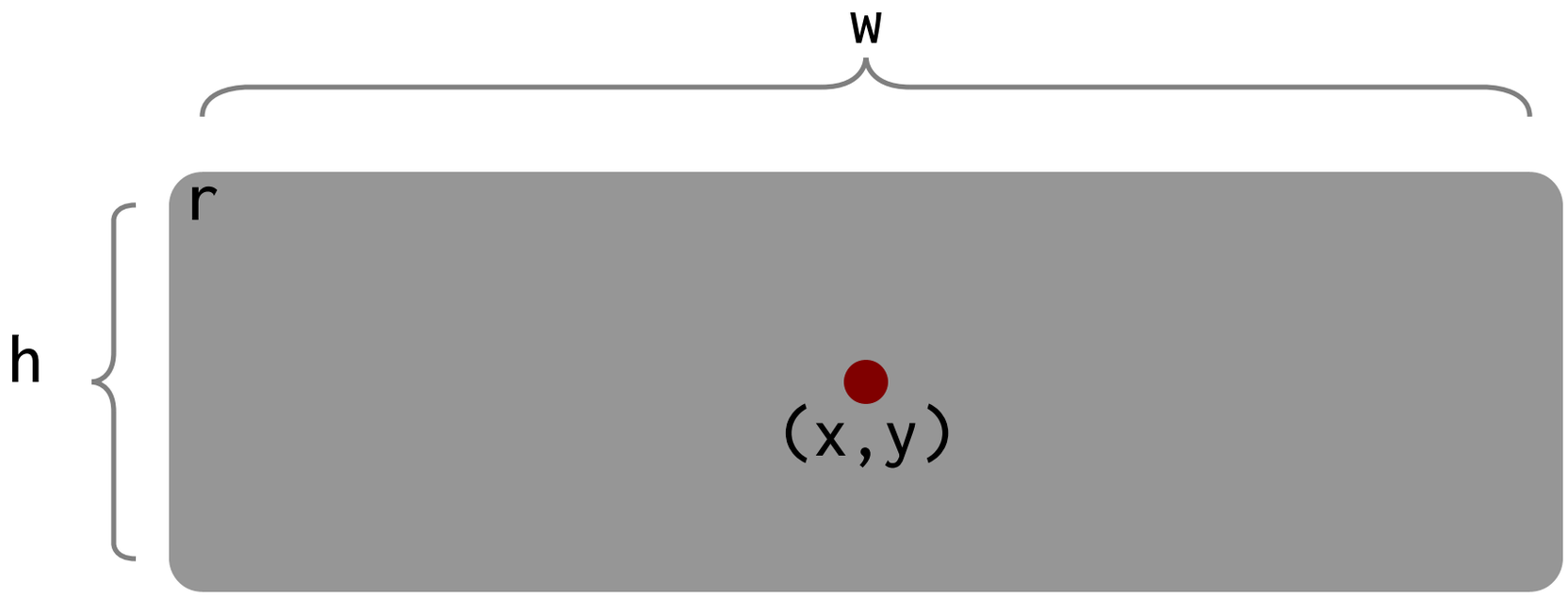

```
rect x y w h [color] [op]
```

```
rect 20 20 10 5
```

```
rect 50 20 10 5 "maroon"
```

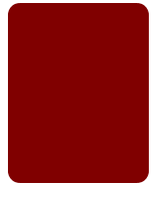


```
rect 80 20 5 10 "maroon" 20
```

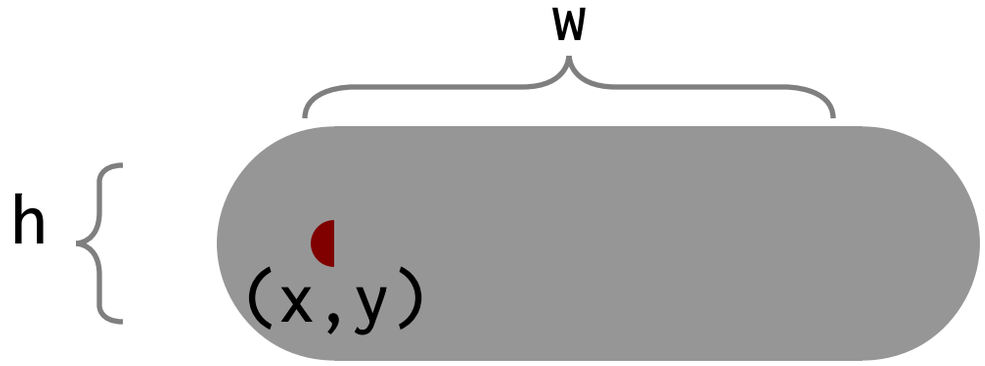



```
rrect x y w h r [color] [op]
```

```
rrect 20 20 10 5 1
```

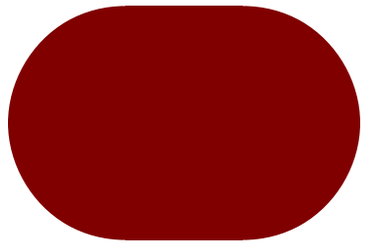


```
rrect 80 20 5 10 1 "maroon"
```

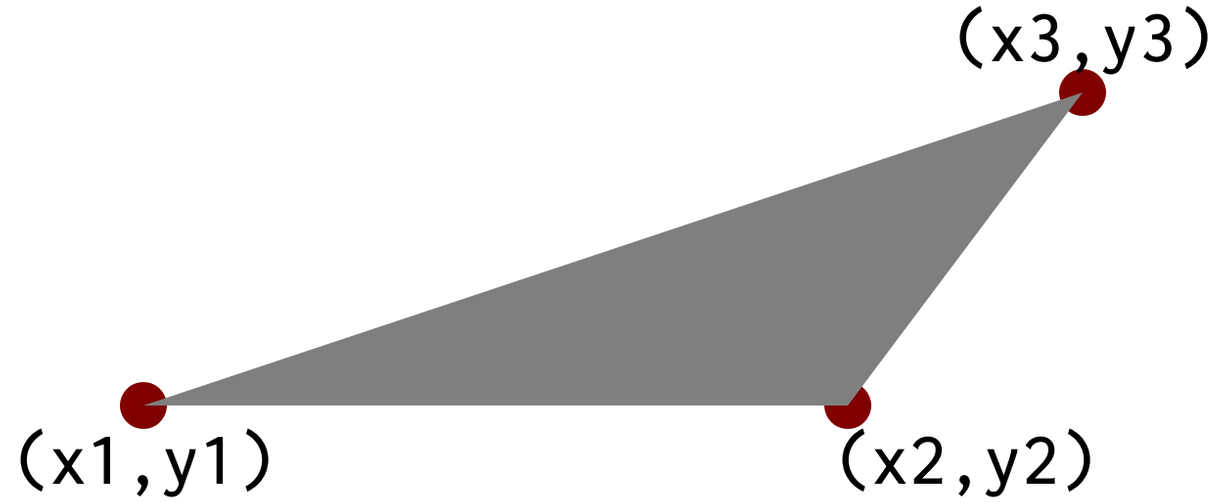


pill x y w h [color]

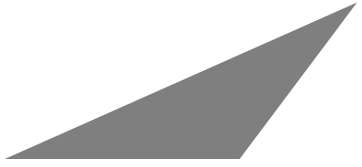
pill 20 20 10 5



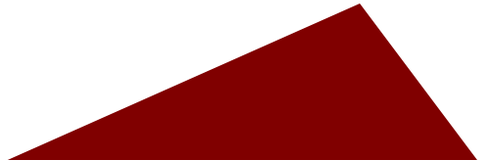
pill 80 20 5 10 "maroon"



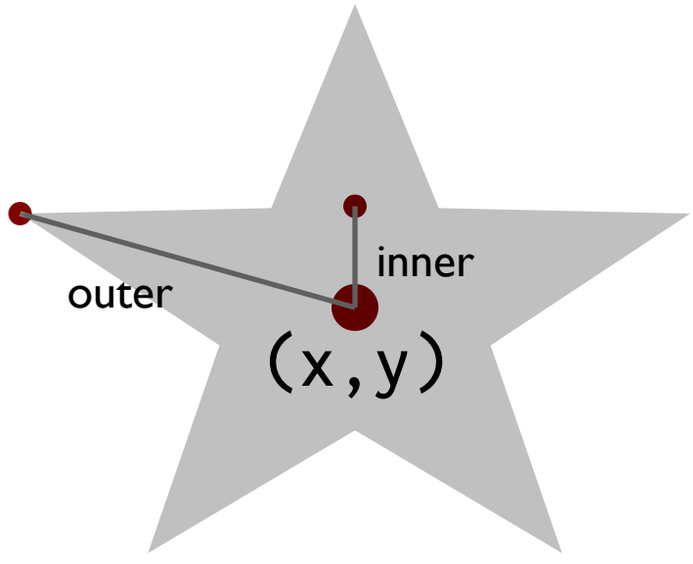
polygon "x1 x2...xn" "y1 y2...yn" [color] [op]



polygon "10 25 20" "20 30 20"

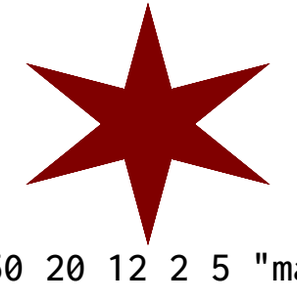


polygon "70 85 90" "20 30 20" "maroon"



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

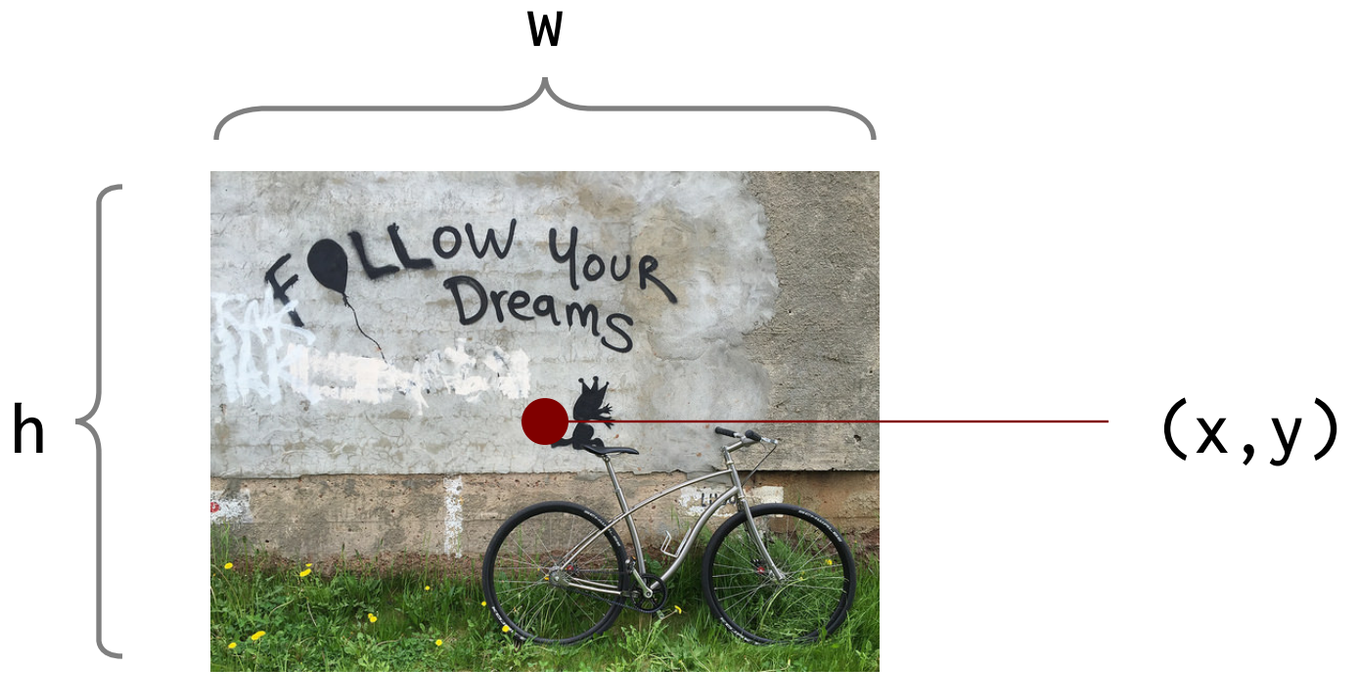
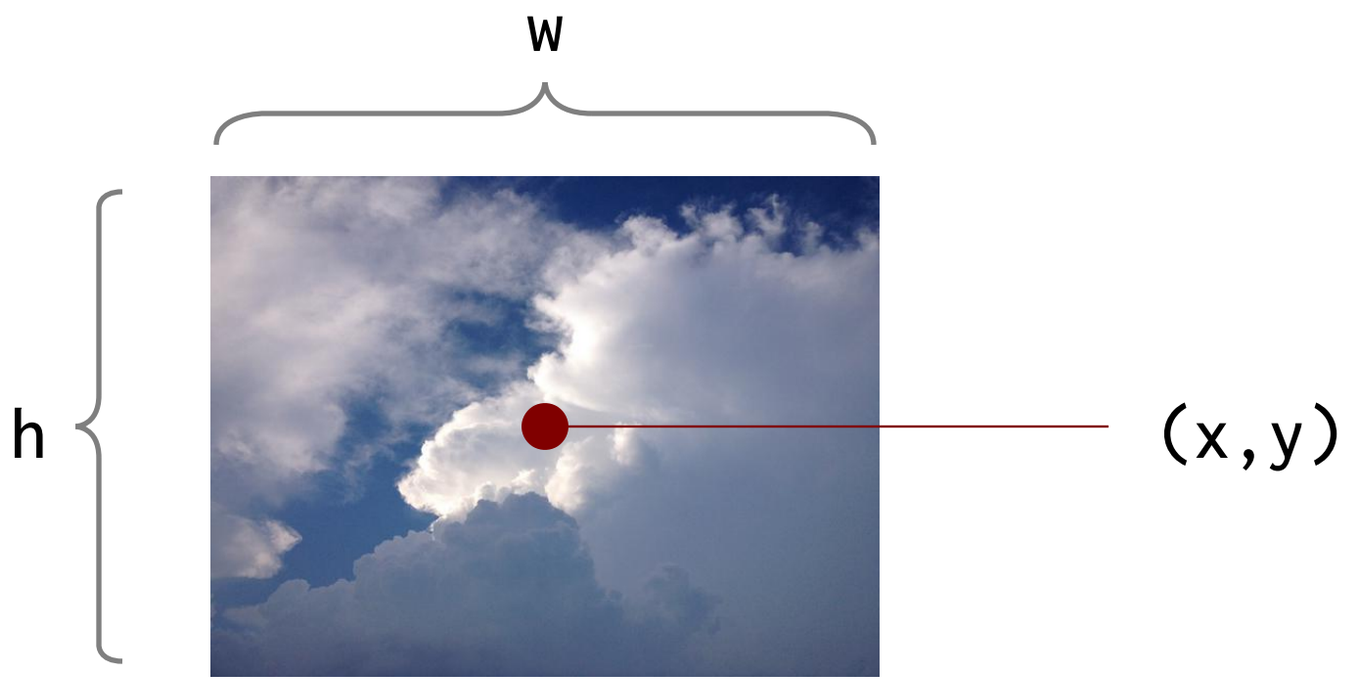


image "file" x y w h [scale] [link]

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

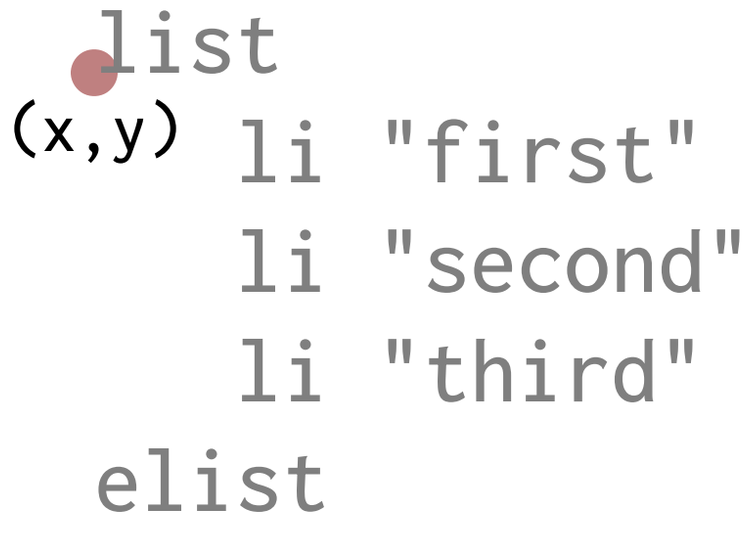
```
cimage "cloudy.jpg" "sky" 20 25 640 480 10
```

sky

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

Lists

Plain list	`list`	`x y fontsize [font] [color] [op] [spacing]`
Bullet list	`blist`	`x y fontsize [font] [color] [op] [spacing]`
Numbered list	`nlist`	`x y fontsize [font] [color] [op] [spacing]`
Centered list	`clist`	`x y fontsize [font] [color] [op] [spacing]`




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

one

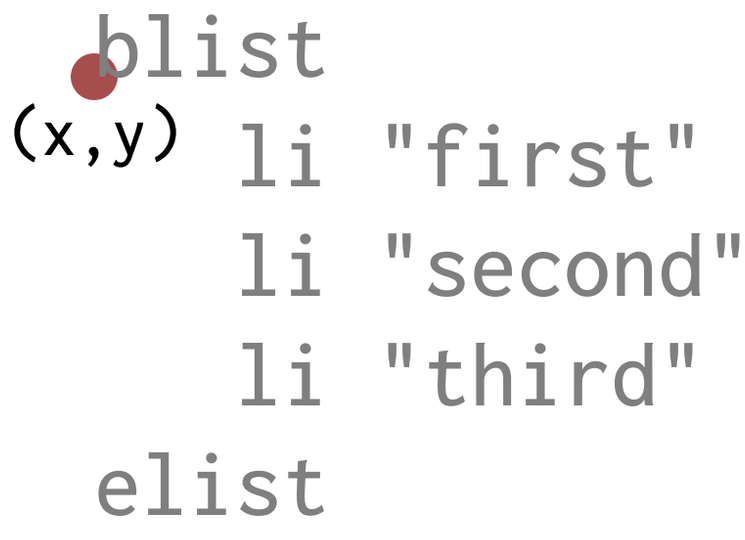
two

three

```
list 20 30 2.5
```

one
two
three

```
list 60 30 4 "serif" "maroon" 100 1.0
```



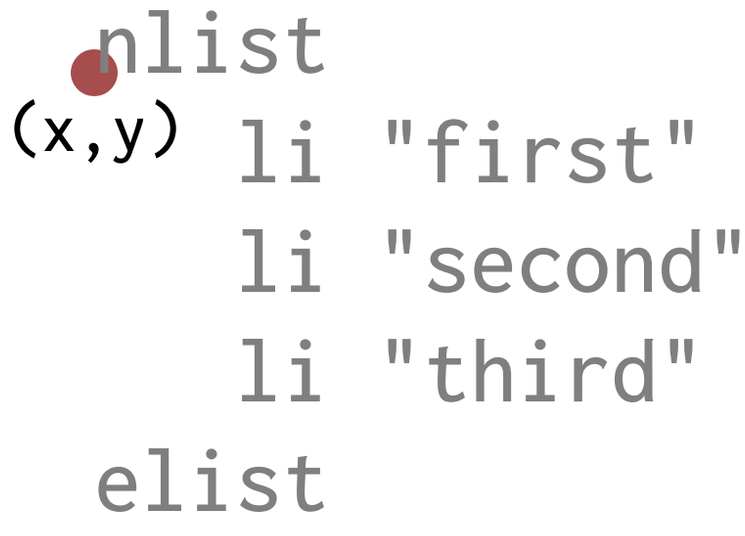

```
blist x y fontsize [font] [color] [op] [spacing]
```

- one
- two
- three

```
blist 20 30 2.5
```

- *one*
- *two*
- *three*

```
blist 60 30 4 "serif" "maroon" 100 1.0
```



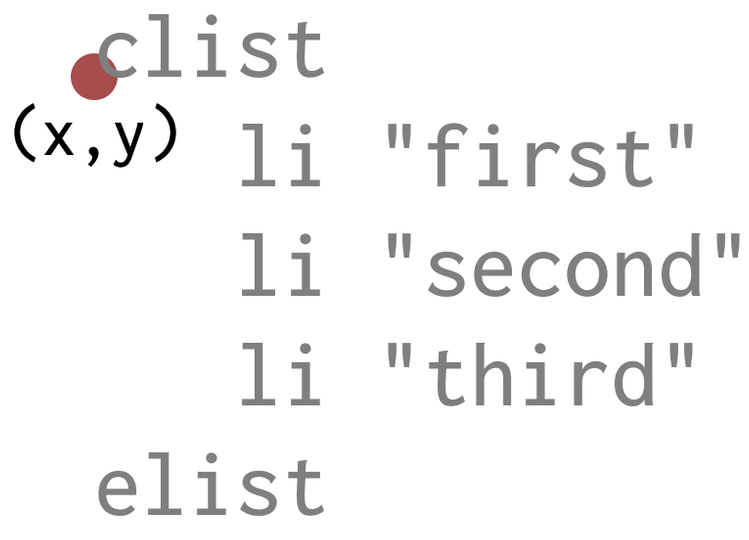
nlist x y fontsize [font] [color] [op] [spacing]

1. one
2. two
3. three

nlist 20 30 2.5

1. one
2. two
3. three

nlist 60 30 4 "serif" "maroon" 100 1.0




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

first one

second

third and last

```
clist 20 35 2.5
```

first one
second
third and last

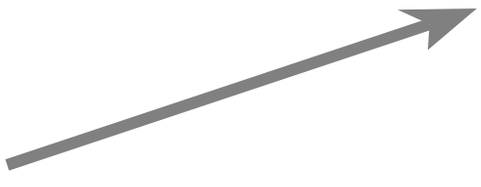
```
clist 60 30 4 "serif" "maroon" 100 1.0
```

Arrows

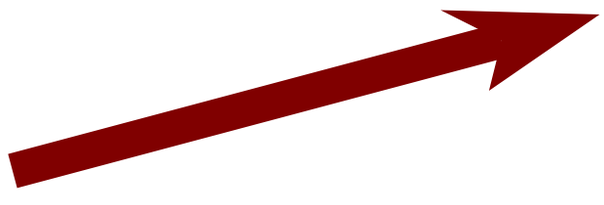
Straight	`arrow`	`x1 y1 x2 y2 [lw] [aw] [ah] [color] [op]`
Left curved	`lcarrow`	`bx by cx cy ex ey [lw] [aw] [ah] [color] [op]`
Right curved	`rcarrow`	`bx by cx cy ex ey [lw] [aw] [ah] [color] [op]`
Up curved	`ucarrow`	`bx by cx cy ex ey [lw] [aw] [ah] [color] [op]`
Down curved	`dcarrow`	`bx by cx cy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


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

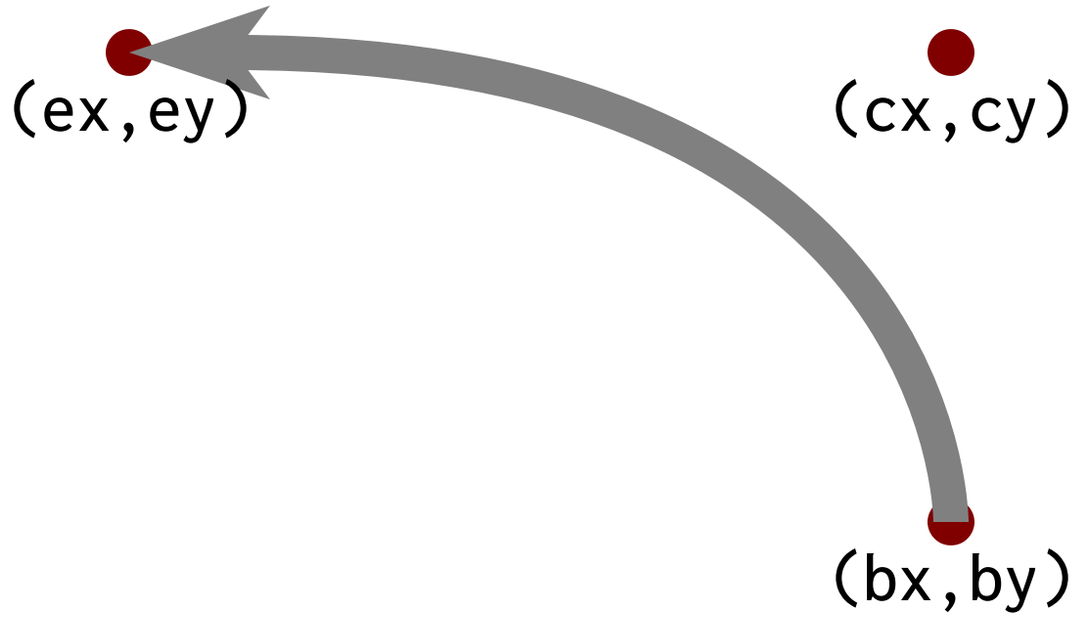
arrow 10 20 30 20



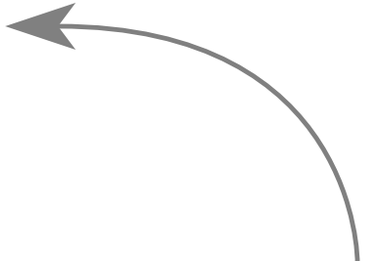
arrow 40 20 60 30 0.5



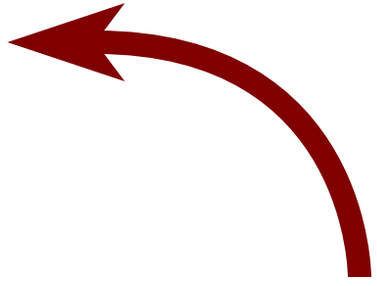
arrow 70 20 95 30 1.5 6 6 "maroon"



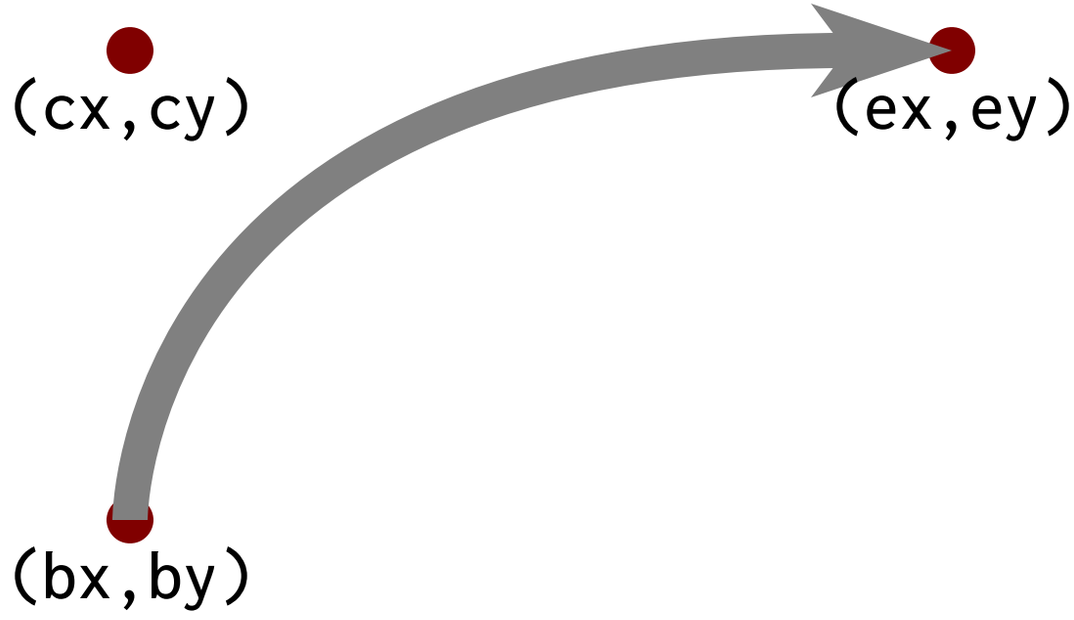
lcarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]



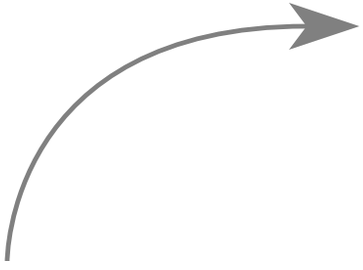
```
lcarrow 30 20 30 35 15 35
```



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

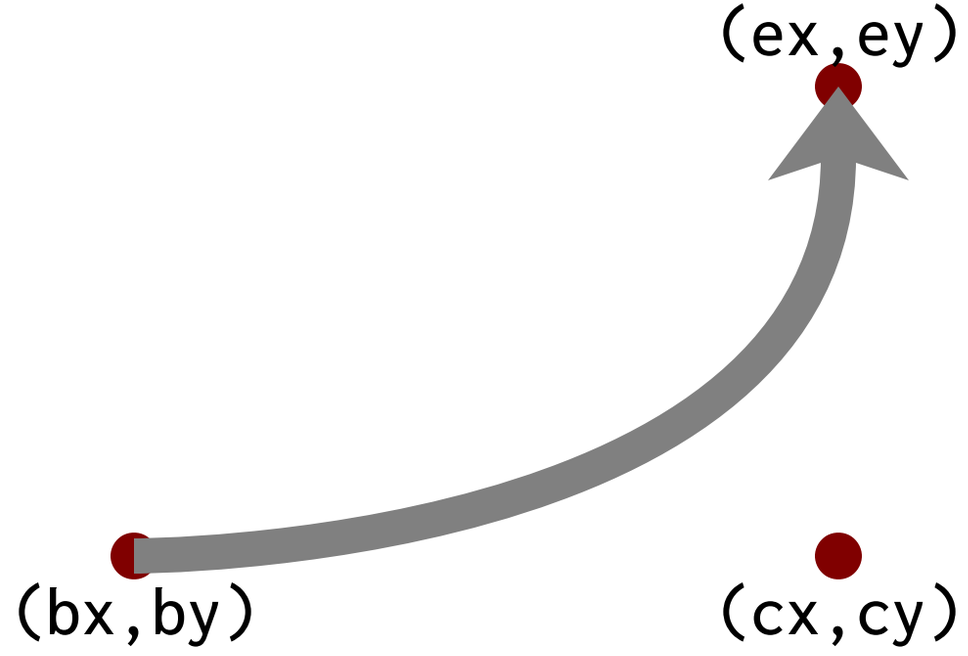


rcarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]

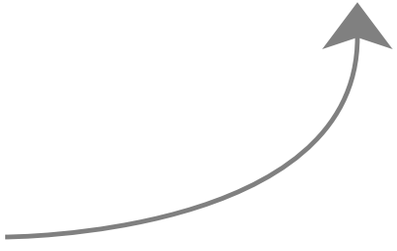


rcarrow 15 20 15 35 30 35

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

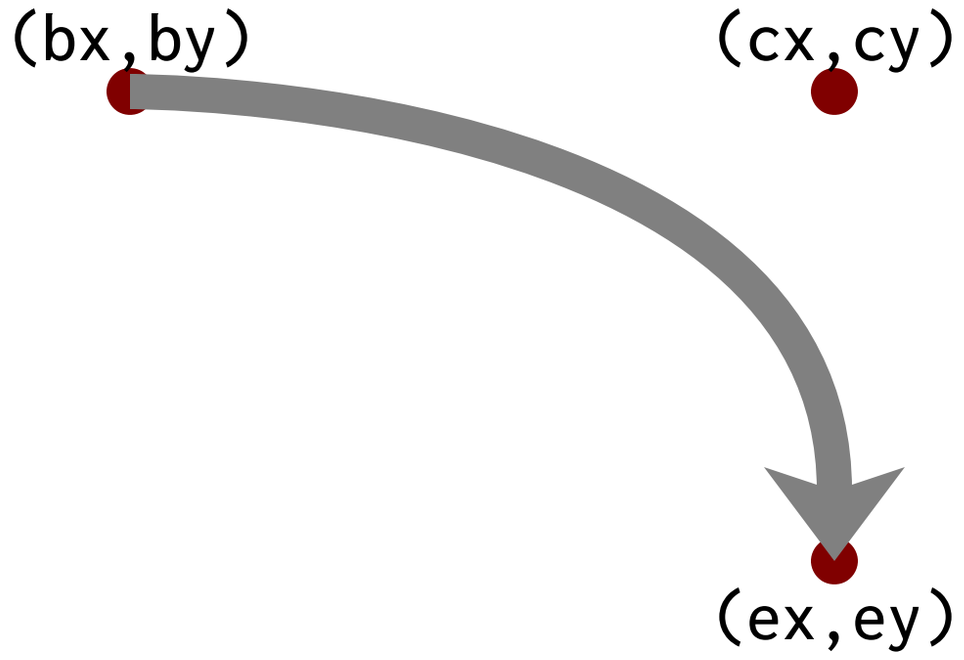


ucarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]



ucarrow 15 20 30 20 30 35

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



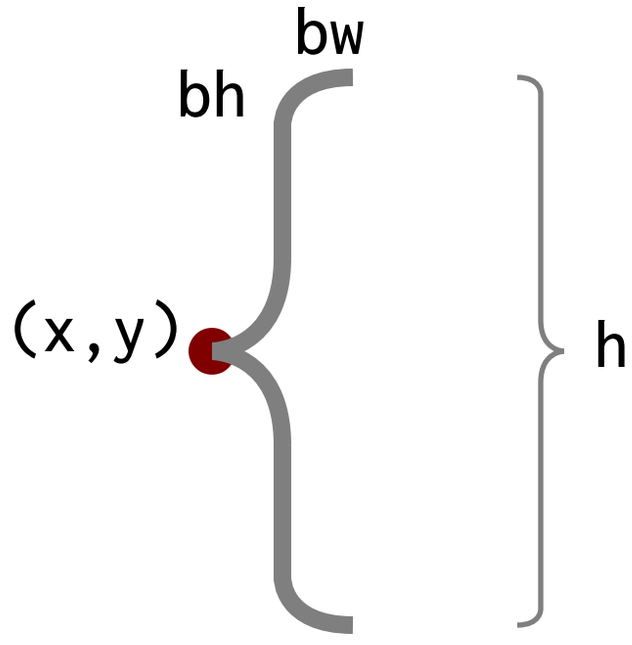
dcarrow bx by cx cy ex ey [lw] [aw] [ah] [color] [op]

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]`

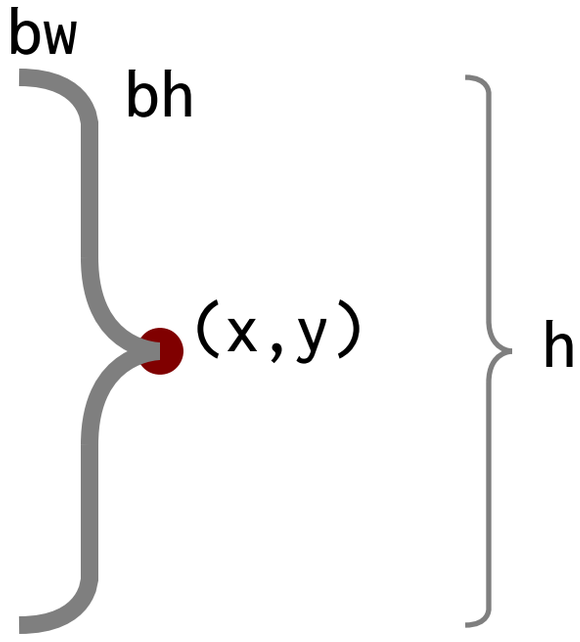


lbrace x y h bw bh [lw] [color] [op]

lbrace 20 25 20 2 2

lbrace 50 25 20 4 4 1

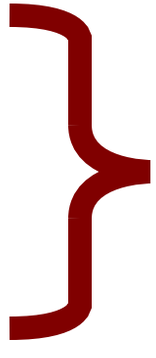
lbrace 80 25 20 6 3 1 "maroon"



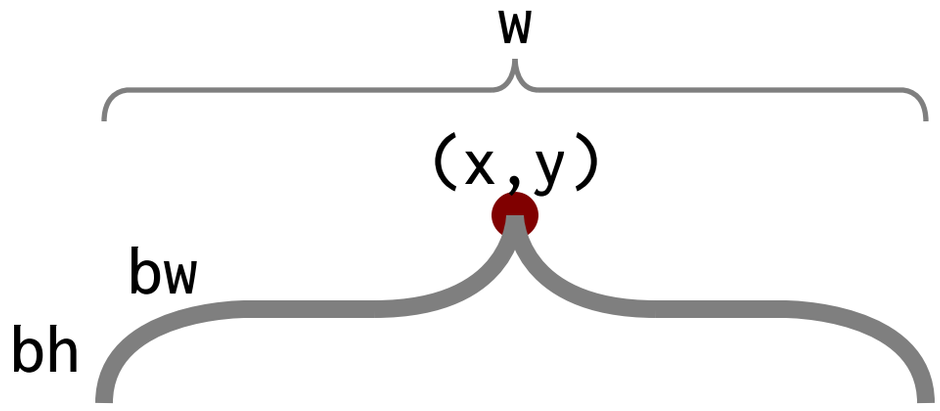
rbrace x y h bw bh [lw] [color] [op]

rbrace 20 25 20 2 2

rbrace 50 25 20 4 4 1



rbrace 80 25 20 6 3 1 "maroon"

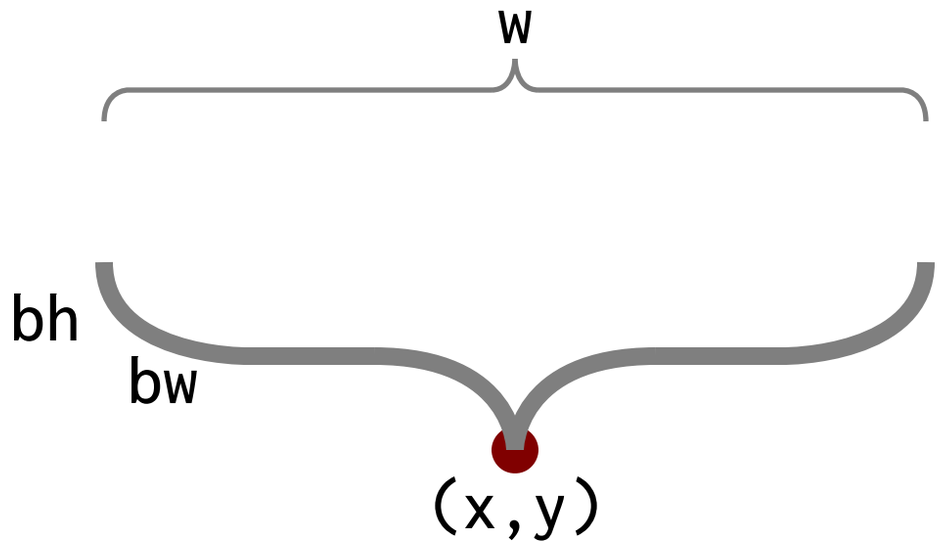


ubrace x y w bw bh [lw] [color] [op]

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"

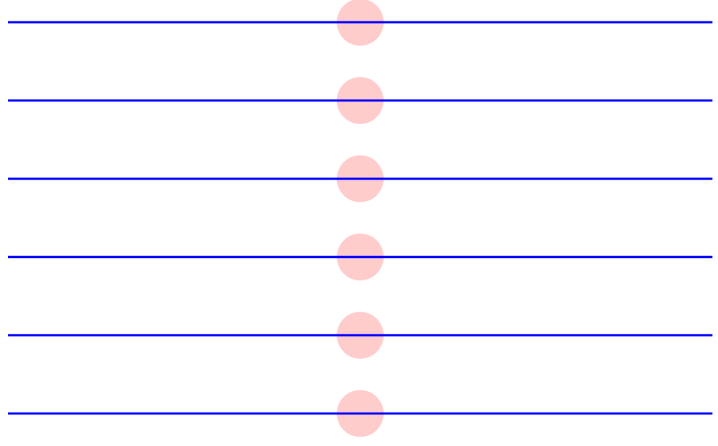
Assignments and Data

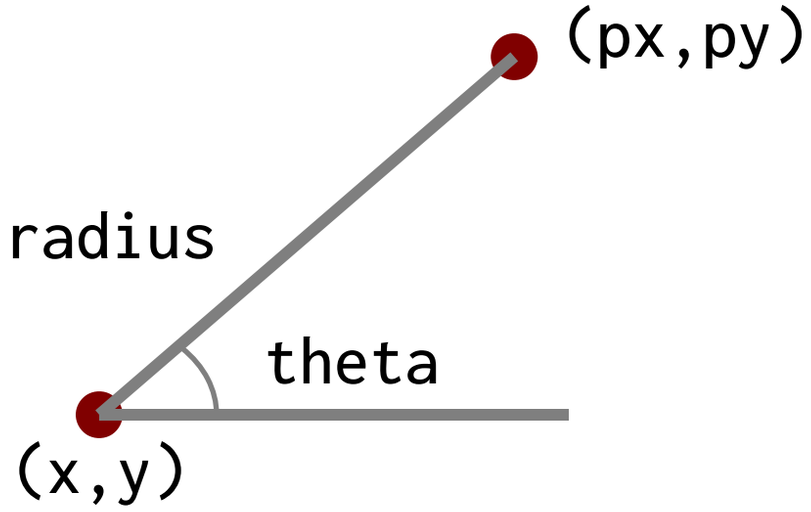
Loop	`for v=`	`begin end [increment] ... efor`
Polar coordinate (x)	`x=polarx`	`x y radius angle`
Polar coordinate (y)	`y=polary`	`x y radius angle`
Value mapping	`value=vmap`	`data min1 max1 min2 max2`
Random number	`value=random`	`min max`
Area	`value=area`	`expression`
Formatted text	`value=format`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

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

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

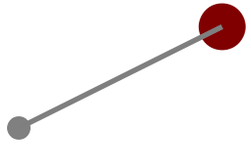
```
for v=10 35 5
    hline 50 v 30 0.1 "blue"
    circle 65 v 2 "red" 20
efor
```

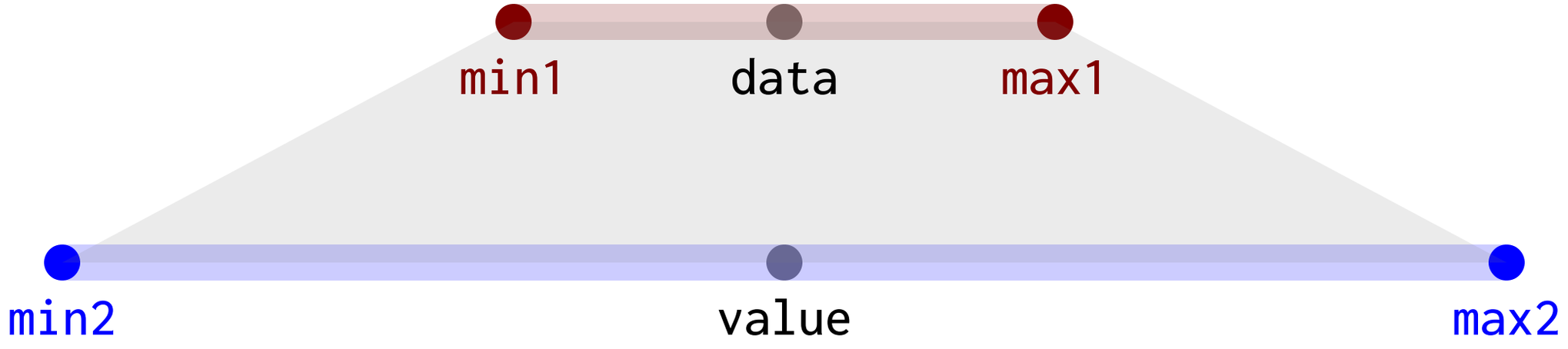





```
px=polarx x y radius theta
py=polary x y radius theta
```

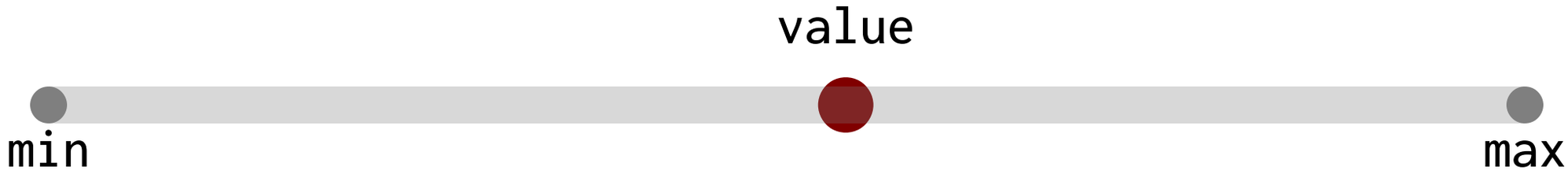
```
cpx=60
cpy=20
px1=polarx cpx cpy 10 30
py1=polary cpx cpy 10 30
line cpx cpy px1 py1
circle cpx cpy 1  "gray"
circle px1 py1 2 "maroon"
```



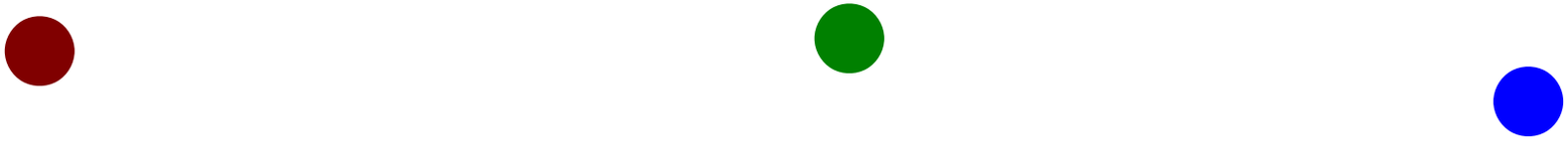


value=vmap data min1 max1 min2 max2

```
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"
```



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"
```

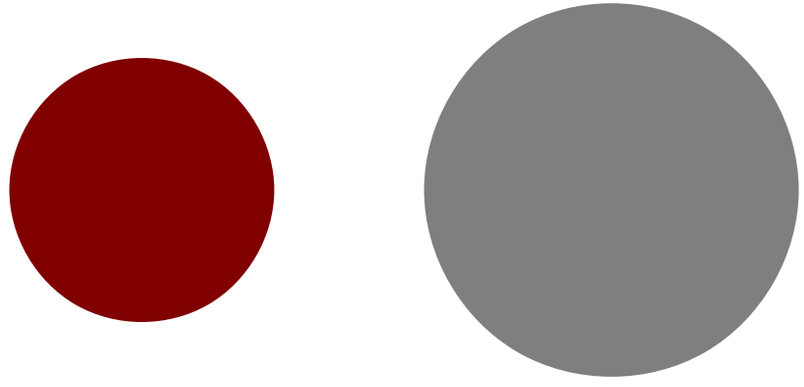
```
rx1=random 75 95
ry1=random 15 35
circle rx3 ry3 3 "blue"
```

```
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

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

data file

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"
```