Cheatography

caluc2-test2 Cheat Sheet

by NoxLupus (NoxLupus) via cheatography.com/46432/cs/15308/

circeles

x = h +- r*cos(t)
y = h -+ r*sin(t)
center = (h,k)

2t makes it go around twice
-t makes it go around backwards

rectangl

ArcLenth: L = ⚡ root(1 + f'(x)^2)

Suface of Revolution:
X-axsis: S = ⚡ root(1 + f'(x)^2) * 2 ◕ f(x)
Y-axsis: S = ⚡ root(1 + f'(x)^2) * 2 ◕ x

Volum of Revolution:
X-axsis: S = ⚡ ◕ f(x)^2
Y-axsis: S = ⚡ ◕ x^2

⚡
◕

Parmetric

deriv:
dy/dx = y'/x'
dy^2/dx^2 = (dx/dy)'/x'

ArcLenth: L = ⚡ root((dx/dt)^2 + (dy/dt)^2)

(dx/dt)^2 =
(dy/dt)^2 =

convertoin

x = rsin◷	r = root(x^2 + y^2)
y = rcso◷	◷ = tan^{-1}(y/x)

Polar

Area:	A = 1/2 ⚡ (f(◷))^2

ArcLenth: L = ⚡ root((r)^2 + (dr/d◷)^2)

conic

r = ed/(1+ecos ◷)	r = ed/(1-ecos ◷)
r = ed/(1+esin◷)	r = ed/(1-esin ◷)

left	right
down	up

r =

e	how you tell the type
d	deretix: for cos x = d for sin y = d

centrodids

$\bar{x}$ = 1/ ⚡ (f(x)-g(x)) * ⚡ x*[f(x)-g(x)]

$\bar{y}$ =1/ ⚡ (f(x)-g(x)) * ⚡ 1/2*[f(x)^2-g(x)^2]

if g(x) = x-axis you can just drop it

trig

	◕/6	◕/4	◕/3
sin	1/2	root(2)/2	root(3)/2
cos	root(3)/2	root(2)/2	1/2
tan	root(3)/2	1	root(3)