

```

> # Some issues and mistakes from the labs
> x := 3;
                                     x := 3
(1)
> f := x → x2;
                                     f := x → x2
(2)
> f(2);
                                     4
(3)
> f(x);
                                     f(x)
(4)
> #This is a problem since we expect f(x) to be a function, not a single value.
#We need to use the command unassign to erase the value of x;
> unassign(x);
Error, (in unassign) cannot unassign `3' (argument must be
assignable)
> unassign("x");
Error, (in unassign) cannot unassign `x' (argument must be
assignable)
> unassign('x'); #this is the correct syntax
> #Importance of syntax
> f1 := x → piecewise(x = 1 .. 2, 1, x > 2, 2);
                                     f1 := x → piecewise(x = 1 .. 2, 1, 2 < x, 2)
(5)
> f1(1); #unexpected result!
                                     0
(6)
> f1 := x → piecewise(1 ≤ x and x ≤ 2, 1, x > 2, 2); f1(1); f1(2); f1(3);
                                     f1 := x → piecewise(1 ≤ x and x ≤ 2, 1, 2 < x, 2)
                                     1
                                     1
                                     2
(7)
> f2 := x → piecewise(1 ≤ x ≤ 2, 1, x > 2, 0);
                                     f2 := x → piecewise(1 ≤ x and x ≤ 2, 1, 2 < x, 0)
(8)
> #piecewise takes more than 2 pieces
f3 := x → piecewise(x < 0, 1, 0 ≤ x ≤ 2, 2, x > 2, 3);
                                     f3 := x → piecewise(x < 0, 1, 0 ≤ x and x ≤ 2, 2, 2 < x, 3)
(9)
> f3(-2); f3(0); f3(3);
                                     1
                                     2
                                     3
(10)
> f4 := x → { piecewise(x ≤ 2, 1, x > 2, 2) };
                                     f4 := x → { piecewise(x ≤ 2, 1, 2 < x, 2) }
(11)
> f4(1);
                                     {1}
(12)
> #Here is a different command that plots equations
implicitplot(x2 + y2 = 1, x = -2 .. 2, y = -2 .. 2);

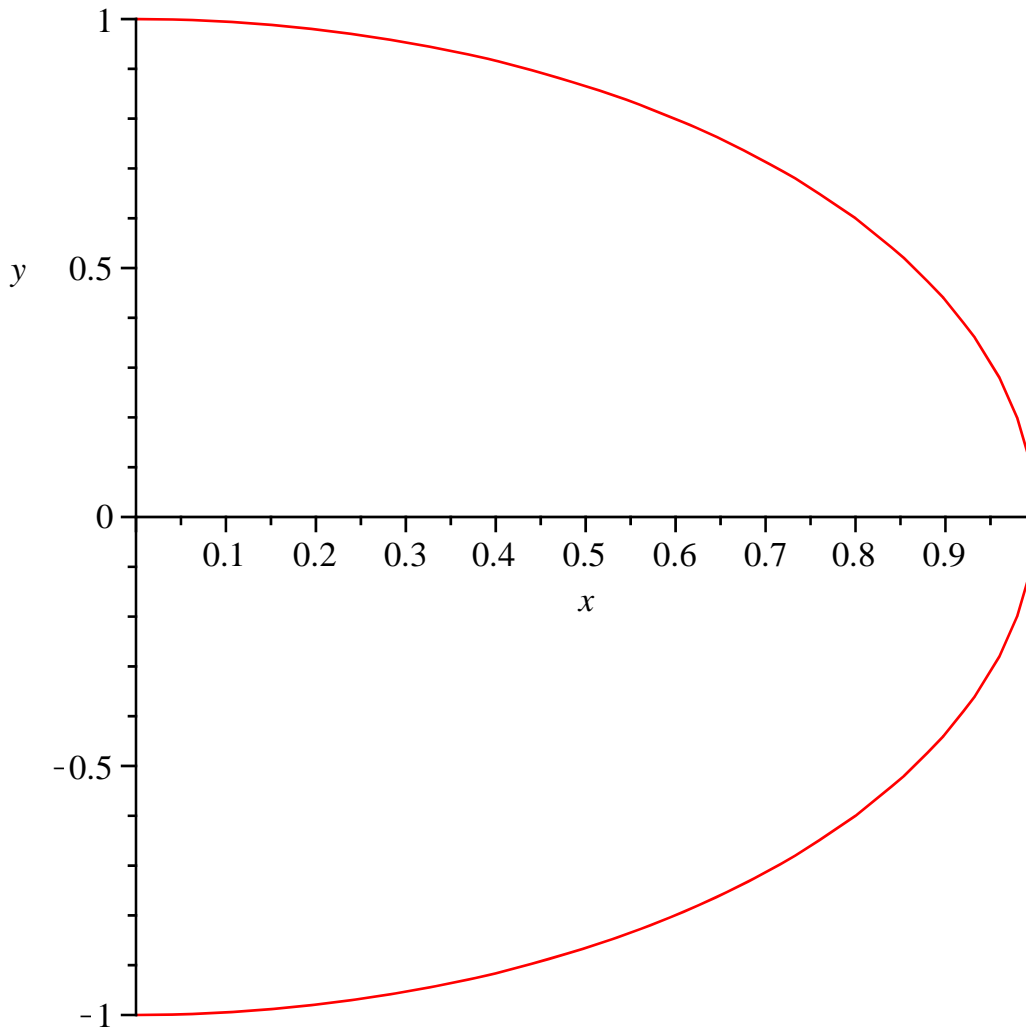
```

#the result is unexpected -- it substitutes 9 for x^2

```
implicitplot(9 + y^2 = 1, 3 = -2..2, y = -2..2)
```

(13)

```
> unassign('x'); implicitplot(x^2 + y^2 = 1, x = 0..1, y = -1..1);
```



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> #we want a circular look, not elliptical.
```

```
implicitplot(x^2 + y^2 = 1, x = 0..1, y = -1..1, scaling = constrained);
```

