[6.39] Convert equations to a parameterized form

A function f(x,y) = 0 can be 'parameterized' by converting it into two other functions x(t) and y(t), where *t* is the parameter. This functions x(t) and y(t) are not necessarily unique; there may be many functions that give the same result f(x,y). This function applies one possible parameterization of *x* and *y*, namely t = y/x.

```
parcurve(f,x,y)
Func
©ParCurve(f,x,y) parametrizes curve f(x,y)=0 as x(t),y(t)
©Bhuvanesh Bhatt
expr("solve("&string(f=y-t*x)&" and y-t*x=0,{"&string(x)&","&string(y)&"})")
EndFunc
```

For example, to find a parametric expression for

$$x^3 + x^2 - y^2 = 0$$

use the call

```
parcurve(x^3+x^2-y^2,x,y)
```

which returns

$$x = t^2 - 1 \text{ and } y = \left(t^2 - 1\right) \cdot t \text{ or } x = 0 \text{ and } y = 0$$

The first two equations are the useful parameterizations; the second two are extraneous solutions.

(Credit to Bhuvanesh Bhatt)