```
#Additional 6
>
> with(Groebner):
> with(PolynomialIdeals):
>
> I:=<y*x-x^3,z-x^3>;
                                        3       3
                            I := <y x - x , z - x >

> G:=Basis(I,plex(x,y,z));
                  3    3      2     2               2              3
         G := [-z  + y  z, -y  z + z  x, y x - z, z x  - y z, -z + x ]

> factor(G);
                 2    3       2                            2         3
          [-z (z  - y ), z (-y  + z x), y x - z, z (-y + x ), -z + x ]

>
> fs := { seq( f=0, f in G ) }:
> solve(fs);
                                                  3       2
                 {y = y, z = 0, x = 0}, {z = x , y = x , x = x}

#Notice that the second is the parameterization of twisted cubic!
>
> J:=<x,z>;
                                  J := <x, z>

> K:=<y-x^2,z-x^3>;
                                       3       2
                             K := <z - x , y - x >

> Simplify(K);
                                 2   2
                          <-y + x , y  - z x, y x - z>

>
> Quotient(I,K);
                                     <x, z>

#which is indeed equal to J
> Quotient(I,J);
                                 2   2
                          <-y + x , y  - z x, y x - z>

#which is indeed equal to K
```