

Procedures for Polynomial GCDs and Calculating Principle Ideals

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Here are procedures for POLYGCD and POLYPID, the two procedures you were asked to write up in class. Note these use the procedures we wrote up in class. These are described in the “Programming in Maple” notes.

```
POLYGCD := proc(f,g) local h,s,r;
h := f;
s := g;
while s <> 0
do
r := POLYDIV(s,h)[2];
h := s;
s := r;
od;
h;
end;
```

and

```
POLYPID := proc(L)
if not type(L,list) then ERROR('Need to input a list of polynomials')
if nops(L) = 1 then op(1,L);
```

```
else POLYGCD(op(1,L),POLYPID(L[2..nops(L)]));  
fi;  
end;
```

These are, of course, just my (Dylan) implementations of these procedures. Yours may be different, and that's fine as long as it does the same thing.