```
> (* Mantej Sokhi *)
```

Q2: PART B:

```
> (* MAPLE CHECK *)
  restart:
> with(Groebner):
> f := (y^3)+(2*x*y)-y-1:
  divOne := x+(y^2)-1;
  divTwo := (x*y)-1;
  divList := [divOne,divTwo]:
```

$$divOne := y^2 + x - 1$$

$$divTwo := xy - 1 \quad \textbf{(1)}$$

```
> resOne := NormalForm(f,divList,plex(x,y),'Q1'):
  resTwo := NormalForm(f,divList,grlex(x,y),'Q2'):
> resOne;
  Q1;
```

$$-y^3 + y - 1$$

$$[2y, 0] \quad \textbf{(2)}$$

```
> resTwo;
  Q2;
```

$$0$$

$$[y, 1] \quad \textbf{(3)}$$