



## Compilerbau

Aufgabe 35a)

Die Funktionsdefinition:

| ?- Af = to(Ax, Fx), Af = to(Fx, FFx), Fn = to(tuple(Af, Ax), FFx).

Allgemeinster Unifikator:

Af = to(Ax, Ax)  
FFx = Ax  
Fn = to(tuple(to(Ax, Ax), Ax), Ax)  
Fx = Ax

Ein konkreten Aufruf:

| ?- Tinc = to(int, int), Twice = to(tuple(to(A, A), A), A),  
Twice = to(Tincfour, Twiceincfour),  
Tincfour = tuple(Tinc, int), Av = Twiceincfour.

Allgemeinster Unifikator:

A = int  
Av = int  
Tinc = to(int, int)  
Tincfour = tuple(to(int, int), int)  
Twice = to(tuple(to(int, int), int), int)  
Twiceincfour = int

Aufgabe 35b)

Die Funktionsdefinition:

| ?- Amap = Tfn, Tfn = to(tuple(Af, Al), Tcase),  
Tcase = list(XA), Tcase = Te2, Al = list(Ax),  
Al = Axs, Te2 = Amapfxs, Te2 = list(Tfx),  
Af = to(Ax, Tfx), Amap = to(tuple(Af, Axs), Amapfxs).

Allgemeinster Unifikator:

Af = to(Ax, Tfx)  
Al = list(Ax)  
Axs = list(Ax)  
Tcase = list(Tfx)  
Te2 = list(Tfx)  
Tfn = to(tuple(to(Ax, Tfx), list(Ax)), list(Tfx))  
Amap = to(tuple(to(Ax, Tfx), list(Ax)), list(Tfx))  
Amapfxs = list(Tfx)  
XA = Tfx

### Aufgabe 36)

Die Funktionsdefinition:

```
| ?- Ae = Tfnl, Tfnl = to(A1, Tfny), Tfny = to(Ay, Tcase),  
    Tcase = bool, Tcase = Tif, A1 = list(Ax), A1 = Axs,  
    Teq = to(Beta, to(Beta, bool)), Teq = to(Ax, to(Ay, bool)),  
    Tif = bool, Tif = Tecall, Ae = to(Axs, to(Ay, Tecall)).
```

Allgemeinster Unifikator:

```
Ae = to(list(Ax), to(Ax, bool))  
A1 = list(Ax)  
Axs = list(Ax)  
Ay = Ax  
Beta = Ax  
Tcase = bool  
Tecall = bool  
Teq = to(Ax, to(Ax, bool))  
Tfnl = to(list(Ax), to(Ax, bool))  
Tfny = to(Ax, bool)  
Tif = bool
```