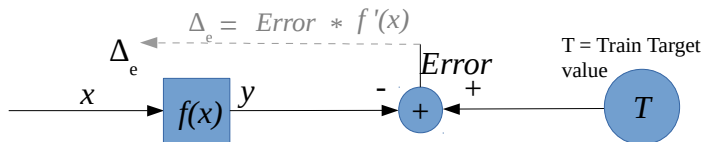


Chain Rule recap



$$\begin{aligned}\frac{dz}{dx} &= g'(f(x)) * f'(x) \\ &= g'(y) * f'(x)\end{aligned}$$

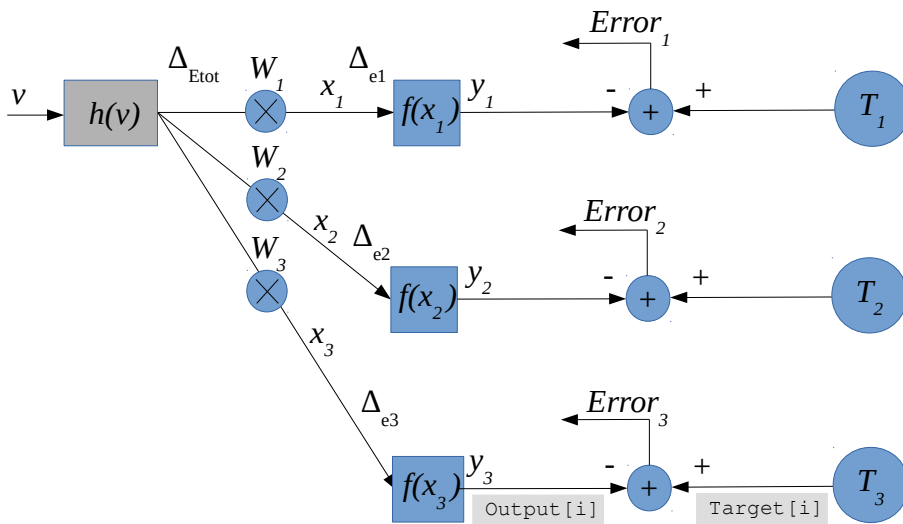
Backpropagation with delta error Δ_e



$$\Delta_e = Error * f'(x)$$

```
Delta_e = (Target - Output) * derivF(x);
```

Network with weights and dot product Δ_{Etot}



Calculate the Δ_{Etot} in code

```
for(i=0; i<nr_of_weights ; i++){
    Delta_total += W[i] * (Target[i] - Output[i]) * derivF( x[i] );}
```