```
Backtrace (k,v_k)
/* map objective into PI assignment */
begin
    v=v_k
    while k is a gate output
        begin
            i = inversion of k
            select an input (j) of k with value x
            v=v⊕i
            k=j
        end
    /* k is a PI */
    return (k,v)
end
```