

## Exercise 3.10 Example of repeat=True in a substitution

```
1 {a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s,u#}::Indices(position=independent).
2
3 foo := A B + A B A B + A B A B A B + A B A B A B A B .      # cdb(ex-0310.foo.001,foo)
4 bah := @(foo).                                                  # cdb(ex-0310.bah.001,bah)
5
6 substitute (foo,$A B -> A$)                                     # cdb(ex-0310.foo.002,foo)
7 substitute (bah,$A B -> A$,repeat=True)                        # cdb(ex-0310.bah.002,bah)
```

Without `repeat=True` only the first match in a product will be substituted.

$$\begin{aligned}\text{ex-0310.foo.001} &:= AB + ABAB + ABABAB + ABABABAB \\ \text{ex-0310.foo.002} &:= A + AAB + AABAB + AABABAB\end{aligned}$$

But with `repeat=True` then all matches in a product will be substituted.

$$\begin{aligned}\text{ex-0310.bah.001} &:= AB + ABAB + ABABAB + ABABABAB \\ \text{ex-0310.bah.002} &:= A + AA + AAA + AAAA\end{aligned}$$