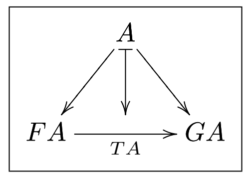
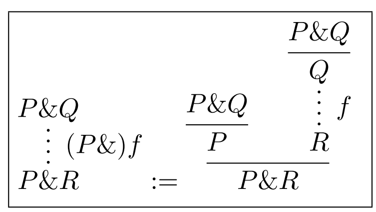
Some demos for dednat6: 3.tex
http://angg.twu.net/dednat6/tests/3.tex
http://angg.twu.net/dednat6/tests/3.tex.html
http://angg.twu.net/dednat6/tests/3.pdf
See:
http://angg.twu.net/dednat6.html

```
%D diagram T:F->G
%D 2Dx     100    +20   +20
%D 2D 100         A
%D 2D           / - \
%D 2D          /  |  \
%D 2D         v   v   v
%D 2D +25 FA ------> GA
%D 2D             TA
%D (( A FA -> A GA ->
%D    FA GA -> .plabel= b TA
%D    A FA GA midpoint |->
%D ))
%D enddiagram
$$\pu \diag{T:F->G}$$
```



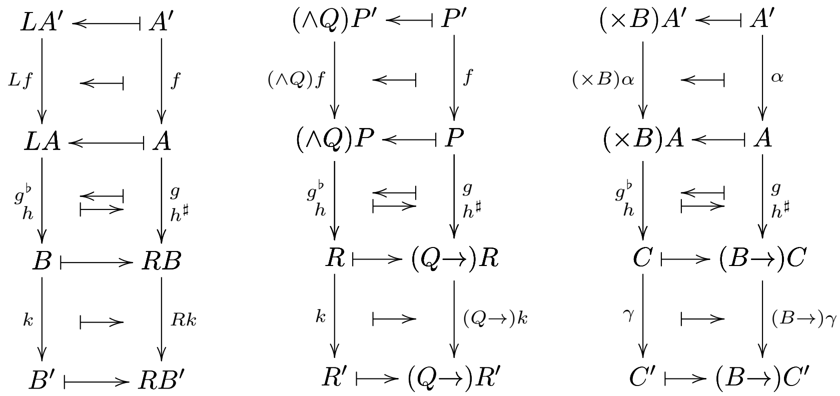

```
$$\defdiag{T:F->G}{
   \morphism(300,0)/->/%
    <-300,-375>[{A}`{FA};{}]
   \morphism(300,0)/->/%
    <300,-375>[{A}`{GA};{}]
   \morphism(0,-375)|b|/->/%
    <600,0>[{FA}`{GA};{TA}]
   \morphism(300,0)/|->/%
    <0,-375>[{A}`{\phantom{O}};{}]
  }
  \diag{T:F->G}
$$
```

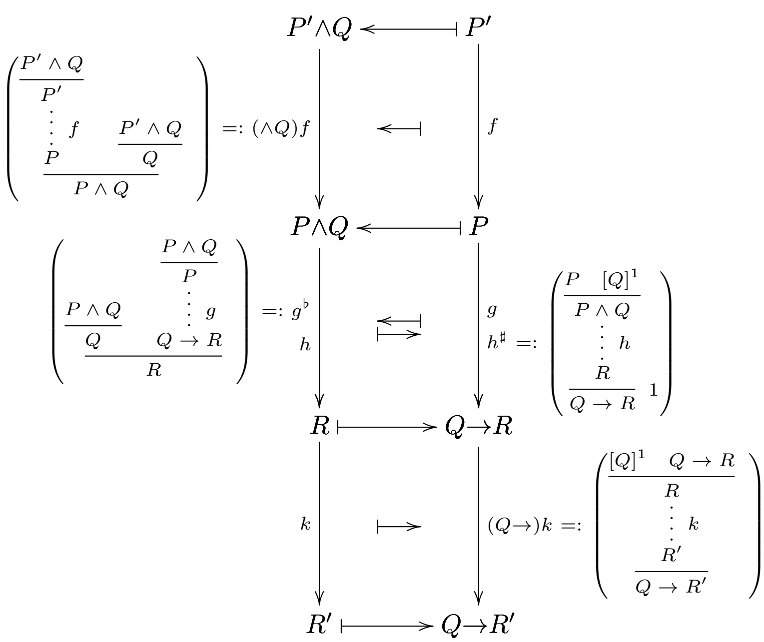
```
%:                      P\&Q
%:                      ----
%:               P\&Q    Q
%:               ----    :f
%:  P\&Q          P      R
%:     :(P\&)f    -------
%:  P\&R            P\&R
%:
%:  ^t1             ^t2
%:
$$\pu \ded{t1} := \ded{t2}$$
```

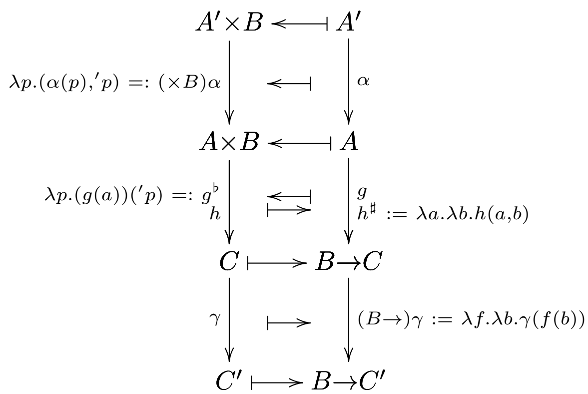



```
$$
\defded{t1}{
 \infer*[{(P\&)f}]{ \mathstrut P\&R }{
  \mathstrut P\&Q } }
\defded{t2}{
 \infer[{}]{ \mathstrut P\&R }{
  \infer[{}]{ \mathstrut P }{
   \mathstrut P\&Q } &
  \infer*[{f}]{ \mathstrut R }{
   \infer[{}]{ \mathstrut Q }{
    \mathstrut P\&Q } } } }
\ded{t1} := \ded{t2}
$$
```

Our archetypal adjunctions: $L \dashv R$, $(\wedge Q) \dashv (Q\to)$, $(\times B) \dashv (B\to)$.






$A' \times B$
A'
$\lambda p.(\alpha(p), 'p) =: (\times B)\alpha$
α
$A \times B$
A
$\lambda p.(g(a))('p) =: g^\flat$
h
g
$h^\sharp := \lambda a.\lambda b.h(a,b)$
C
$B \to C$
γ
$(B\to)\gamma := \lambda f.\lambda b.\gamma(f(b))$
C'
$B \to C'$

Kan extensions: a general case and a particular case.