

Inference at \* 1  
of proof for Lemma fun\_thru\_spread:

1.  $A : \text{Type}$
2.  $B : A \rightarrow \text{Type}$
3.  $p : x:A \times B(x)$
4.  $C : \text{Type}$
5.  $D : \text{Type}$
6.  $f : C \rightarrow D$
7.  $b : x:A \rightarrow B(x) \rightarrow C$

$\vdash f(\text{let } x,y = p \text{ in } b(x,y)) = \text{let } x,y = p \text{ in } f(b(x,y))$   
by ((New ['x';'y'] (D 3))  
CollapseTHEN (AbReduce 0)).

1:

3.  $x : A$
4.  $y : B(x)$
5.  $C : \text{Type}$
6.  $D : \text{Type}$
7.  $f : C \rightarrow D$
8.  $b : x:A \rightarrow B(x) \rightarrow C$

$\vdash f(b(x,y)) = f(b(x,y))$

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