Clarifications on Operational Semantics Example

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I wrote an operational semantics example in class, in which I was lazy and avoided explicit mentions of the transitivity rule (which is particularly bad when constructing a formal proof tree). Since this seems to be causing some confusion, I am posting a complete proof of the parts in question below.

$$\dfrac{\dfrac{\dfrac{\dfrac{true}{\langle '1'|Env_0\rangle \Rightarrow 1}\,(1)}{\langle '1'\ '+'\ '2'|Env_0\rangle \Rightarrow \langle 1'+'\ '2'|Env_0\rangle}\,(7) \quad \dfrac{\dfrac{true}{\langle '2'|Env_0\rangle \Rightarrow 2}\,(1)}{\langle 1'+'\ '2'|Env_0\rangle \Rightarrow \langle 1'+'2|Env_0\rangle}\,(10)}{\langle '1'\ '+'\ '2'|Env_0\rangle \Rightarrow \langle 1'+'2|Env_0\rangle}\,(14) \quad \dfrac{true}{\langle 1'+'2|Env_0\rangle \Rightarrow 3}\,(3)}{\langle '1'\ '+'\ '2'|Env_0\rangle \Rightarrow 3}\,(14)$$

Miscellaneous Comments For those of you who are latex users, there is a nice style file called bussproofs for writing proof rules and constructing such proof trees, described at `www.math.ucsd.edu/~sbuss/ResearchWeb/bussproofs/index.html`. For those of you who are users of a certain other office program, I can only offer my sympathy while exhorting you to learn tex since it will be needed for any papers you may write in the future.