Lurch Help for Instructors

Five easy steps to define a rule in Lurch

Lurch is a math word processor that can check your work using the definitions, axioms, theorems, or rules that you want to be able to use. It is easy to define such a rule in Lurch.

Suppose you have typed the following rule:

The transitivity of < rule: If $a<b$ and $b<c$, it follows that $a<c$.

How can you ask Lurch to make this a named rule so that students can refer to it as a reason as illustrated in the Lurch Student Guide?

1 Mark the name of the rule with a *Label*.

Select 'transitivity' and press CTRL+> to get this:

2 Mark the rule as an *if-then rule*.

Select the entire rule, press CTRL+ENTER, and choose `if-then rule`.

3 Mark the *Rule Premises*.

Select $a<b$ and press CTRL+[. Select $b<c$ and press CTRL+[.

The transitivity of < rule: If $a<b$ and $b<c$, it follows that $a<c$.

[If-then rule] [premise, *expression*]

4 Mark the *Conclusion*.

Select $a<c$ and press CTRL+[. Press CTRL+ENTER and choose Rule conclusion.

The transitivity of < rule: If $a<b$ and $b<c$, it follows that $a<c$.

[If-then rule] [conclusion, *expression*]

5 Turn on *Validation*.

Press CTRL+0.

The transitivity of < rule: If $a<b$ and $b<c$, it follows that $a<c$.

The green icon indicates that rule is correctly defined. Press CTRL+SHIFT+r to see it on the list of available rules.

That's it!

For more information

This only illustrates a tiny portion of the functionality available in Lurch for dealing with rules. We have only scratched the surface of the features that are available in this extremely simple and brief example. In particular, there are several ways to make such rules available to students for use on their assignments. For more information try one of the following.

- **Watch the Lurch Introductory Videos**
  See Lurch in action with these video demonstrations.
- **Read the Lurch Student Guide**
  This is a brief help file intended for students who only want to use Lurch to check their work.
- **Take the Lurch Tutorial**
  First time user? No problem. Start here!
- **Read the Advanced Users Guide** - This contains all of the nitty gritty details about how Lurch works for the extreme Lurch fan.
- **Visit the Lurch Website**
  It contains everything from how to get involved to the Lurch source code itself.

- **Join the Lurch email discussion forum**
  As mentioned above, we hope it will become an online community of professors interested in this software and using it in their courses.
- **Contact the authors**
  We would love to hear from you and answer any questions you might have!