

Re: Help with a problem

Source: <http://sci.tech-archive.net/Archive/sci.logic/2005-11/msg00602.html>

- *From:* William Elliot <marsh@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Thu, 24 Nov 2005 03:22:21 -0800
-

On Wed, 23 Nov 2005, George Dance wrote:

> William Elliot wrote:

>> On Wed, 23 Nov 2005, Robert Zimmerman wrote:

>>> Chris Menzel <cmenzel@xxxxxxxxxxxxxxxxxxxx> wrote:

>>>>

>>>>> On Wed, 23 Nov 2005 04:49:35 GMT, Robert Zimmerman <rfz1@xxxxxxxxxxxx> said:

>>>>>> I'm am learning logic from Copi's book (as a hobby). There is an

>>>>>> advanced problem:

>>>>>>

>>>>>> With the rules of inference, prove the validity of:

>>>>>>

>>>>>> A

>>>>>> therefore $B \vee \sim B$

>>>>>>

>>>>>> I am horribly stuck. Any help would be appreciated. I'm losing sleep.

>>>>

>>>>> What rules of inference do you have available?

>>>>

>>>> The "19 rules of inference" from Copi's book "Intro to Logic" (that's

>>> the short answer). i.e. mp, mt, hs, ds, cd, etc etc.

>>>

>> Huh? mp is MP, modus ponens?

>

> Yes. mp is modus ponens, mt is modus tollens, hs is hypothetical

> syllogism, cd is constructive dilemma, etc., etc. Those are all

> standard abbreviations for standard nd rules.

>

Dang if I ever learn them, nor have they been of any notice in the texts I've studied. However, locating mothers 87 year text book "Essentials of Formal Logic", I find some mentions of Modus ponendo tollens and Modus tollendo ponens. That's about all so far. Have you see mpt and mtp before?

>> Here's natural deduction proof with classical negation

>> leaving reasons, rules and references for the reader.

>>

>> assume $\sim(p \vee \sim p)$

>> $(p \vee \sim p) \rightarrow f$

>> assume p

Re: Help with a problem

>> p v ~p
>> f
>> p -> f
>> ~p
>> p v ~p
>> f
>> ~(p v ~p) -> f
>> p v ~p
>
>
.

• *Follow-Ups:*

◆ [**Re: Help with a problem**](#)

◇ *From:* G . Frege

• *References:*

◆ [**Help with a problem**](#)

◇ *From:* Robert Zimmerman

◆ [**Re: Help with a problem**](#)

◇ *From:* Chris Menzel

◆ [**Re: Help with a problem**](#)

◇ *From:* Robert Zimmerman

◆ [**Re: Help with a problem**](#)

◇ *From:* William Elliot

• Prev by Date: [**Re: The MetaMathematical Theorem that Almost Was**](#)

• Next by Date: [**Re: Help with a problem**](#)

• Previous by thread: [**Re: Help with a problem**](#)

• Next by thread: [**Re: Help with a problem**](#)

• Index(es):

◆ [**Date**](#)

◆ [**Thread**](#)