

Homework Help Using a Web-Based Chat Room with an Equation Editor

by Dan Beeker, Indiana University

Why don't we have equations in chat rooms?

We should we care?

The screenshot shows a web browser window with the URL `mathim.com/DansChat`. The page title is "MathIM" and it includes instructions: "TeX enclosed in dollar signs. EX: Hello $\sqrt{2}$ is irrational. To invite a friend, link them to this page."

The chat window, titled "DansChat", shows the following conversation:

- 20:07:52 <Dan - Prof> what equation are you using?
- 20:08:11 <Pete> $a+b/c$
- 20:08:53 <Dan - Prof> Oh my, you are using text. Send it to me as a mathtype eqtn.
- 20:09:39 <Pete> $a + b/c$
- 20:11:17 <Dan - Prof> Oh my. Is that $a + \left(\frac{b}{c}\right)$ or $\frac{(a+b)}{c}$?
- 20:12:19 <Dan - Prof> Review the order of operations for your calculator. It's a nuisance but very often the problem isn't your math ability but knowing what order your calculator does the calculations.

Below the chat window is a LaTeX editor toolbar with icons for α , Δ , \pm , t_0 , x^2 , $\frac{a}{b}$, \sqrt{x} , \int_a^b , $\lim_{x \rightarrow \infty}$, $\sum_{n=0}^{\infty}$, and $\nabla \cdot \vec{E}$. There is a text input field and a "Send" button. Below the input field is a "Preview:" section.

On the right side of the page, there are several advertisements, including "Drive Medical 4-Wheel Rollator 102", "Cole-Parmer", "Mueller BU-00285", and "Dell Latitude Laptop".

At the bottom of the page, there are links: [Contact](#) :: [Physics Forums](#) :: [LaTeX help](#) :: [Source code](#)

Where it started.

P105 Version of "Gone with the Wind"



33 dB = 10 log (2000)
I'm soooo a ten!

102 dB = 20 log (###???)
Lord Help me!

Photo Warner Brothers Studios

Background – the problem



I understand
the theory. I just
can't do the
problems!

Translates to:
Weak math skills.

Background – the solution:

I understand the theory. I just can't do the problems!

I can help. Meet me in the chat room!



Alas



- Character based chat rooms did not work well for helping students with basic math issues.
- Trivial Example: $A + B / C \neq (A + B) / C$ 😞
- What to do?

Eureka! – Or so I briefly thought.



- Web surfing I found **MathIM.Com**
- Open source. That's good.
- But the site required Latex knowledge to be really functional. :(
No way can I ask a trombone major to learn Latex (though most Music majors are darn smart! – and fun to teach!)
- Again, what to do?

Enter MathType: The (temporary) solution



- I found I could cut and paste from MathType into MathIM chat rooms.
- ~\$40 per student license is too expensive.
- Enter the departmental license. Works out to less than \$1.50 per student.
- Not a panacea but it is workable.

Let's try it!



MathIM.com

Demo the application online. Note, MathType Preferences should be set to Blackboard for Sakai chatroom. May be different for other applications/chat rooms.

For more information contact Dan Beeker at debeeker@indiana.edu

