

## Some Substitute Equipment Solutions

For further clarification, please consult the individuals who came up with the solution and/or tested the solution.

- **Older iPad that does not support Apple pencil [Steve Trettel]**

Zoom's own whiteboard will open on older iPad models. Any touch screen stylus will work, not ideal but good enough.

- **Homemade Stylus [Steve Trettel]**

If you don't have a stylus but need to write on a touch screen in a pinch, you can make one that works pretty alright using q-tip, tinfoil, old pen, tape.



- **Document Camera substitute [Jonathan Love, Steve Trettel]**

Rest your phone on a stack of books or boxes and use it as a document camera like so



Your phone's Zoom camera orientation is linked to my screen orientation; so if you Make sure your phone's screen rotation is unlocked, and then hold your phone up horizontally as though taking a picture before putting it into the makeshift document camera frame, the camera view in Zoom rotates to landscape automatically.

- **iPad/tablet substitute [Beatrice Chetard]**

You can use a [drawing tablet](#), which is relatively cheap and easy to set up alternative to iPads/tablets/document camera.

- **Physical Whiteboard substitute [Jonathan Love]**

Tape or tack paper to the wall and write on it with marker

- **[TouchScreen Substitute](#)**

You can screen-share a PDF of lecture notes to refer to. Absent a touchscreen device, you can use your computer mouse to annotate the document. You may also allow your students to annotate the PDF on screen.

Zoom has the capability to share files on your computer (e.g. PDF of lecture note) as well as a built-in digital white board. To use either of these features, click the green 'Share' button near the bottom of your Zoom conference window and select what you would like to share. The options will only include files that are already open on your computer, so if you plan to share a PDF, have it opened before you begin. It is recommended not to share your whole desktop, as doing so may inadvertently let your students see other windows (e.g. your email) open on your computer.

This may be a great option for more advanced math classes. It doesn't even have to be latex-ed notes. Handwritten notes can be scanned as pdf files. Scanning apps include: [Scannable](#), Dropbox App scanner, TurboScan.

- **Tex solution [Jonathan Love]**

Type up TeX on a shared screen or an Overleaf file everyone can access

- **[Wireless Microphone Substitute](#) [Dylan Cant]**

You can improve the audio by either using a bluetooth headset or connecting your phone to the Zoom meeting as well and using a headset/microphone connected to your phone.

- **Zoom Whiteboard substitute [Jonathan Love]**

Different Zoom breakout rooms cannot share the same whiteboard. Instructors can save pages of whiteboards on Zoom, but students cannot. Instructors and students can take a screen shot of the whiteboard for future reference before moving on. Some alternatives include Shared Overleaf file for collaboration for Tex-savvy students. [ExplainEverything](#) provides a whiteboard that stays filled-in throughout the Zoom session.

- **Zoom Polling [Steve Trettel]**

Stanford's Zoom license doesn't support full polling function. Namely, it will only generate an anonymous polling report. To have a full report with students' names, [PollEverywhere](#) is a good option, as is the built-in polling feature of [campuswire](#).

- **[Zoom best practices](#)**