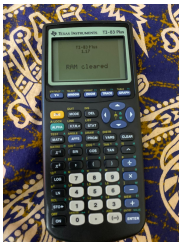
Struc Sharks
2952G

Once our team heard about the Texas Instruments challenge, we immediately wanted to participate in it. We learned that the device had to contain technology made by TI. I have a TI-84 Plus CE and my sister has a TI-84 Plus. We didn't want to take apart something that we actually use, so we went to a thrift store and bought a 21-year-old TI-83 Plus for 20 dollars. I did a graphing test between the 3 graphing calculators and found that the TI-84 Plus CE came in first and the normal TI-84 Plus came in last. The 21 year old calculator came in 2nd!

Finally, the time came to take it apart. The back of the calculator requires hex bits, so we got a hex bit screwdriver and started to take it apart. We had trouble getting the bottom screws out because our screwdriver could not go completely in, so we had to use a Phillips head screwdriver to get the bottom two out. Once we got all the screws out, we had to figure out how to pry apart the two pieces of the chassis, the front and the back. So, we used multiple prying tools and flathead screwdrivers. We inserted one into the miniscule gap between the two plates. We inserted another right behind it. We moved one around the frame in hopes of getting the frame apart. No luck. Finally, we inserted prying tools everywhere there could be a clip connecting the two plates. It took a little bit of finagling, but we got it in the end. Lastly, it was time to marvel at the insides of the calculator for such genius design.

There was also a backup battery under the flap of the battery compartment. I believe it is for resetting the calculator because the graphing takes a LOT of battery, and I do not believe that a watch battery could output that much power. The design of the calculator has a lot of thought put into it. You can tell by how everything is set up inside. Everything has its own specific place, and the design makes it look 'clean', too. We had one goal to accomplish with

taking the item apart. It was to be able to put the calculator back together again with it working. We accomplished that goal!



All in all, this was a great learning experience for our team because we could see the motherboard, all the metal conductors, the screen, etc. We accomplished our goal and now have a new respect for the design process. It seems simple, but the amount of thought that is put into completely changes everything.

Lastly, we would like to thank everyone who helped us along the way, our parents, NanoBeasts, our teachers, and our mentors.