## Essay on Describe How You Undertook A Difficult Task Which Required Time, Thought and Effort

"And you," Mr. Chong said, pointing his finger at me, "you have to set up a mathematics project."

For a moment, I sat dumbfounded on my seat. I never expected our teacher would put the task of setting up a mathematical project onto me. After all, I was not one of the top brains in the class. There were others who were better than me. So after a few seconds, I protested.

Mr. Chong was adamant that I do the project. The school exhibition was due in a couple of months and just about everyone had to play a part in setting up exhibits and projects for the occasion. Some big wigs were coming to visit and we had to give a good impression to them.

I wanted to 'escape' from doing anything but I could not escape this time. Practically all my classmates had some projects to do too, so I was not the only one. The problem was: what project was I going to set up? I had no idea.

So, I consulted Mr. Chong to give me some ideas of what to do. He gave me a few suggestions. After careful consideration, I decided to make an oscillo-harmonograph.

"What the devil is an oscillo-harmonograph?" my two classmates who were supposed to help me asked.

"An oscillo-harmonograph is just a device that records the combination of two slightly damped harmonic motions," I explained,

not too sure myself.

Anyhow, with the advice of Mr. Chong, we proceeded to make the parts for the device. It was a simple thing really. All we had to make were two movable arms that oscillated at right angles to each other. One arm would hold a felt-pen at its top while the other, a platform with a piece of paper affixed to it. When the two arms were set in motion, the pen should trace out a pattern of the combined motion of the arms until the arms stopped oscillating. The result should be a beautiful pattern of smooth lines that followed exact mathematical equations. So the project actually demonstrated mathematics in action or motion.

So the three of us spent about two weeks designing and making a working device. The first two attempts were not too good and we felt discouraged. But we persisted each time refining our design. Finally after nearly a month of sweat and thought we managed to build a working prototype. The first pattern the device drew fired our enthusiasm,. Never had we thought a machine could make such beautiful patterns. In fact, no man could draw such beautiful and exact patterns. Such was our wonder.

The rest of the time before the exhibition was spent making the device even better. We modified the device so it could draw virtually an infinite variety of patterns. Our classmates and teachers were quite amazed by the device and we had endless requests for patterns in various colors.

Anyhow our device with the impressive name was equally impressive on the exhibition day as throngs of people came by to make their requests from the mechanical artist. We obliged as much as we could and had to take turns operating the device. By the end of the day, the five of us (two more volunteered to help us) were tired but happy. It certainly was a difficult task that took us so much time

thought and effort, but it was worth it. We triumphed over what initially looked impossible.