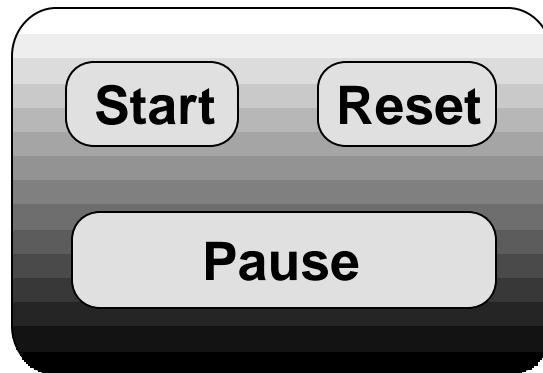


## Baking Cookies

Professor Berzwack was an eccentric computer science professor who was always building gadgets, most of which caught fire as soon as they were turned on. One day Mrs. Berzwack wanted to bake some cookies, but she had a problem. “Listen you old goat,” she said to her husband (very sweetly of course), “Your silly experiments have destroyed every clock, watch and timepiece in this house. If I don’t bake these cookies for exactly nine minutes they’ll be ruined. What am I going to do?”

“Don’t worry dear,” the professor replied. “I’ve recently built a bunch of timers in increments from one minute to ten minutes. I’ll run and get them for you.”

The professor returned in a couple of minutes with a handful of timers marked 1 through 10. Of course when Mrs. Berzwack tried to turn on the nine minute timer it emitted a puff of smoke and burned out. After testing all of the timers the only two she found working were the seven minute timer and the four minute timer. Neither of these timers had an actual time display, they just beeped when their time interval had elapsed. They had three buttons marked as below.



Pressing the Start button causes the timer to start timing. It will beep exactly 4 or 7 minutes after this button is pressed, depending on which timer you are using. The reset button terminates the count-down operation, and the Pause button interrupts it. Pressing the Pause button a second time will resume the countdown where it left off.

After examining these timers for a while, Mrs. Berzwack realized she could use these two timers to time a precise nine-minute interval. How did she do it?