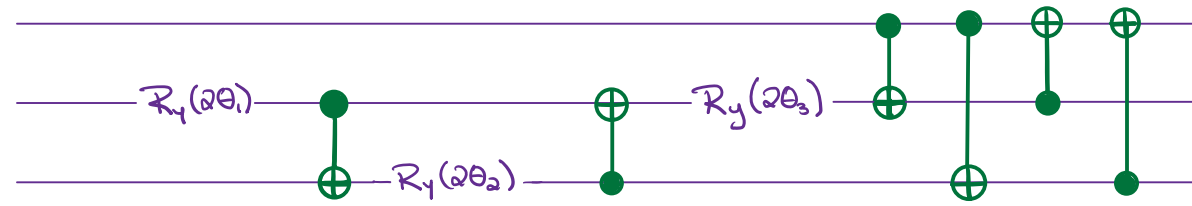
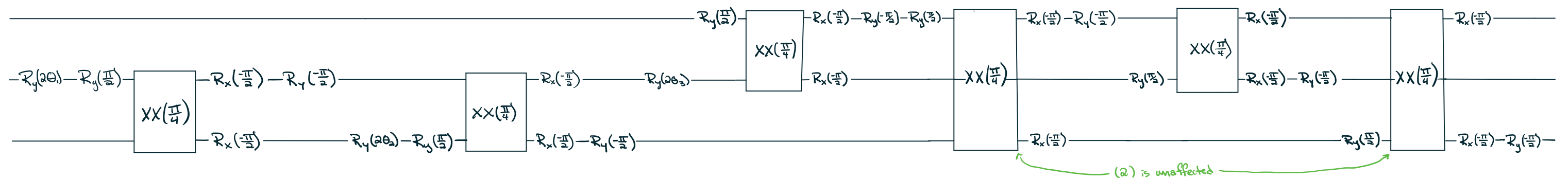
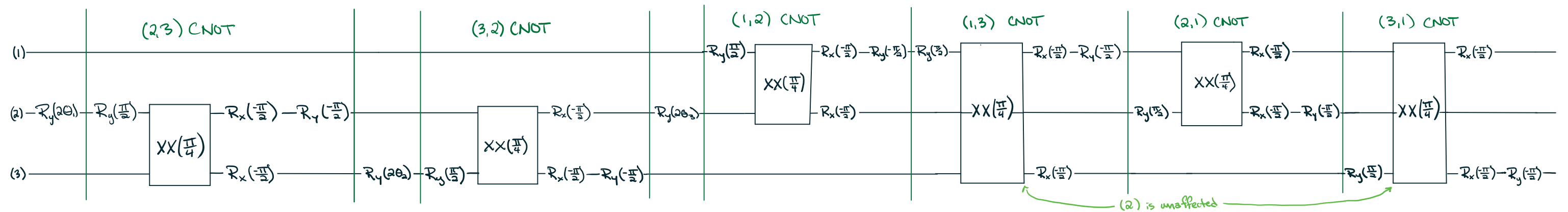


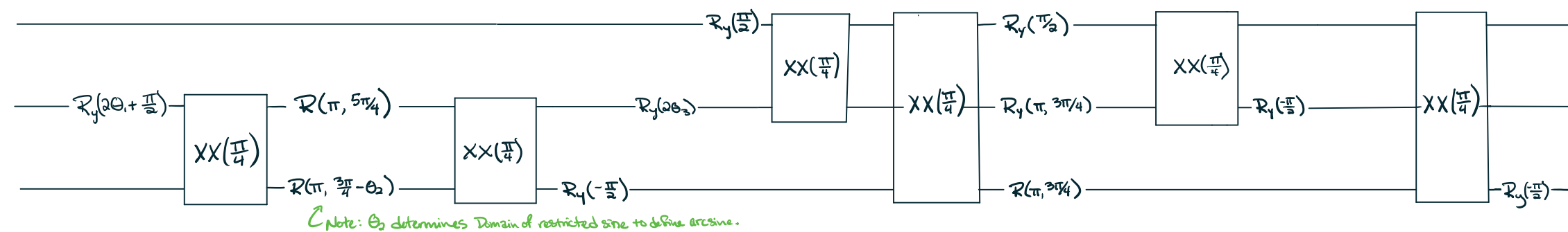
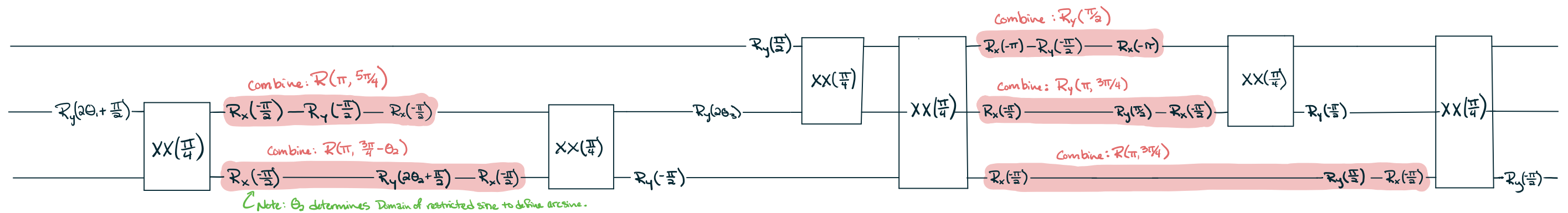
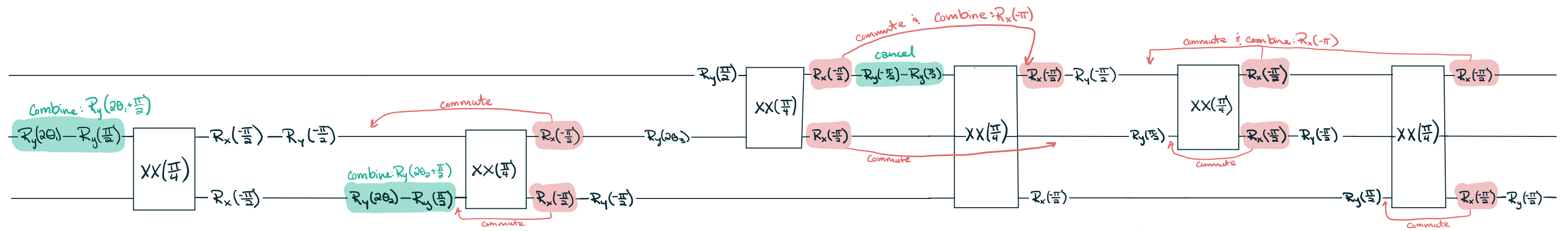
Original:



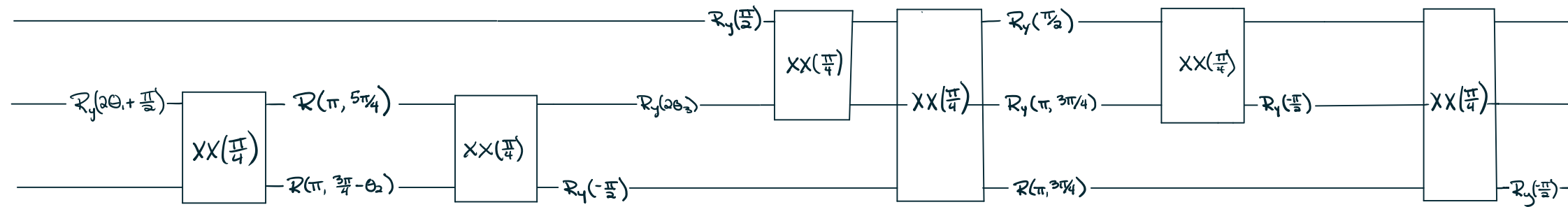
Converting CNOT to XX, R_x, R_y



Simplifying using $R(\pi, \theta)$ & Maslov Identities



Converting to IonQ Native Gates



$$XX(\frac{\pi}{4}) \rightarrow MS(0,0)$$

$$R_y(\frac{\pi}{2}) \rightarrow GP:2(\frac{\pi}{2})$$

$$R(\pi, \theta) \rightarrow GP:(\theta - \frac{\pi}{2})$$

$$R_y(-\frac{\pi}{2}) \rightarrow GP:2(-\frac{\pi}{2})$$

$$R_y(\theta) \rightarrow GP:(\frac{\pi}{4}) - GP:(0) - GP:2(\frac{\pi}{2}) - GP:(\frac{\theta}{2}) - GP:2(\frac{\pi}{2}) - GP:(\frac{\pi}{4})$$

