$$t_{test} = \frac{\sum_{i=1}^{N}\left(NP_{\text{circuit_1,i}} \cdot NP_{\text{circuit_2,i}}\right) \cdot \Delta t}{\sum_{i=1}^{N}\left(NP_{\text{circuit_1,i}} \cdot NP_{\text{circuit_2,i}}\right) \cdot \Delta t} \cdot t_{\text{cycle}}$$