

Worksheet 1 - Quantum Circuit Simulator Level 1

What is a Quantum Circuit?

A simple quantum circuit is a collection of qubits and a list of instructions that act on those qubits. Let's try the activities below to simulate your first quantum circuit.

Activity 1: The Quantum Machine

Start off your quantum computing journey with the [Quantum Machine](#). Follow Q-Bot's tutorials and complete your first quantum simulation!

Activity 2: Other online simulators

Explore different quantum circuit simulators, like:

[Quirk](#) – a drag-and-drop quantum circuit simulator

[IBM Quantum Composer](#) from IBM

[Qiskit](#): an open-source Python module for building quantum circuits and simulating operations on qubits

For more information and tutorials, see our recommendations here:

1. [IBM Quantum Experience](#)
2. [Microsoft Quantum Development Kit](#)
3. [Google Quantum Computing Playground](#)
4. [Rigetti Foresti](#)
5. [Quantum Inspire](#)
6. [Quirk \(by Google\)](#)
7. [Explore gates and circuits with IBM Quantum Composer](#)
8. [Crash Course in Quantum Computing Using Very Colorful Diagrams](#)
9. [Building Quantum circuits in Python](#)