Actually the question must be clarified, that in which time you want to break RSA, for example scientists say that RSA with 512-bit can be broken in 6 week with quantum computers, but with how many qubits? So time is important,2 qubit can break 2048-bit but in which time? Because in quantum computers each qubit can be 0 and 1 in each moment, so **n qubit can handle 2^n state in a moment**, if number of qubits are increased the break time decreases(reverse relation). For example 2048 qubit can handle 2^2048 state in moment. also only qubits are not enough, qubits are memory for quantum computers. More qubits mean you can factor bigger numbers.

**According to mentioned paper:**

... If large quantum computers can be built, then RSA ciphers become useless. It is estimated that 2048-bit RSA keys could be broken on a quantum computer comprising **4,000 qubits and 100 million gates**. Experts speculate that quantum computers of this size may be available within the next 20-30 years.

[Quantum Computing and Cryptography](https://www.entrust.com/wp-content/uploads/2013/05/WP_QuantumCrypto_Jan09.pdf)

**And according to this one:**

Quantum memory units are called qubits and the largest quantum computers capable of running Shor’s algorithm only have about 20 qubits. (A Canadian company called DWAVE has a quantum computer with 512 qubits but it has very high error rates on its qubits and is based on another principle called quantum annealing.) To run Shor’s on 2048 bit RSA would require **at least 10,000 qubits**. It will probably be a while before such a machine can be built.

* Shor’s algorithm