

# Quantum Computer Scientists

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# Contents

<b>New Computers</b> .....	4
<b>The Benefits of Quantum Computers</b> .....	10
<b>Becoming a Quantum Research Scientist</b> .....	18
<b>Once We Have Quantum Computers</b> .....	22
<b>Comprehension Questions</b> .....	26
<b>Glossary</b> .....	27
<b>Notes</b> .....	31

For Review Only

## New Computers

The first computers that were developed were very big and very expensive. However, in less than thirty years, the size and price of computers shrank considerably. In fact, computers became cheap enough for many people to have one or more of them in their homes.

An old computer ▶

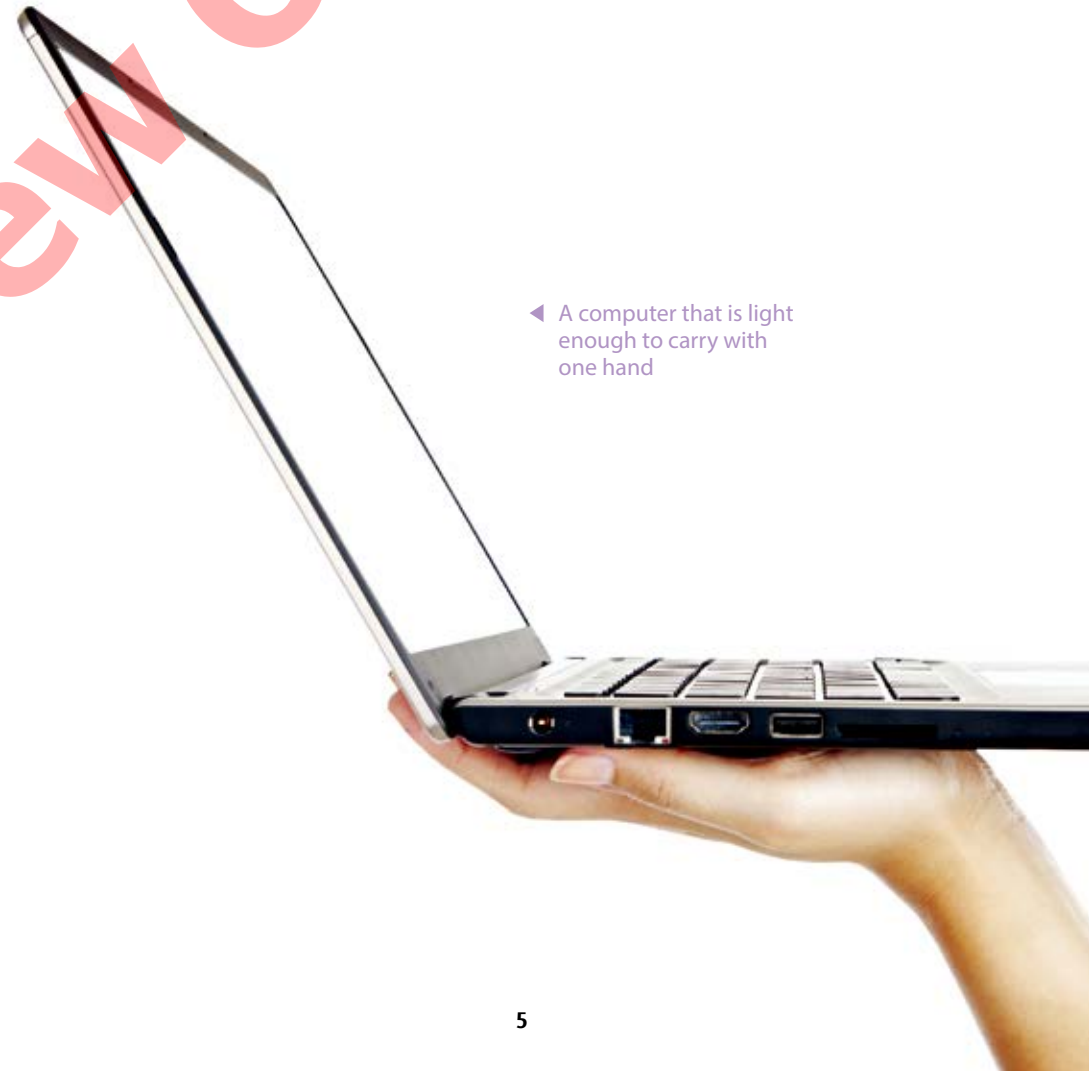


◀ A home computer



Computers also became small enough for people to be able to carry them around. Students can take them to class. Business people can take them on trips for work.

◀ A computer that is light enough to carry with one hand



But computers did not just get cheaper and smaller over the years. They also became more useful. This was due in part to better programs for computers. It was also due to better things inside of computers. New ways of putting information into computers were made. Developments like the optical mouse, touch screen, and computer pen all made it easier for people to work with computers.

A computer drawing tablet



A cordless computer mouse



A touch screen tablet



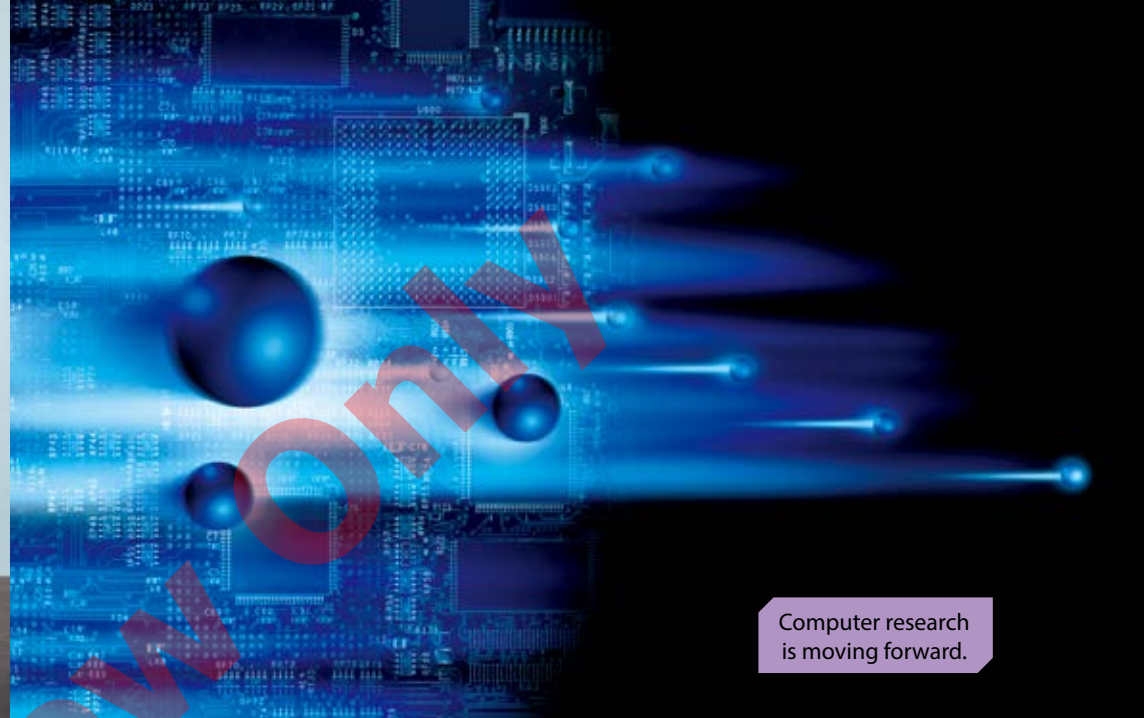
People use the internet to do different things.



Another big change for computers came with the internet. These days, a computer that is not connected to the internet is far less useful for work. It is also less useful for enjoying other benefits of the internet like social media sites, web audio and video content, and all kinds of informational sites.



Thinking like a calculator



Computer research is moving forward.

However, even with all of the changes in computers over the years, one thing has not changed. Computers still have the brains of a calculator. That means computers only think in sequences of 0s and 1s. One part of a computer sequence is called a bit. As bits are put together, they become data for computers to read.

Programs that people write tell computers how to use this data. Then computers can do all of the wonderful things that people ask them to do.



◀ A calculator

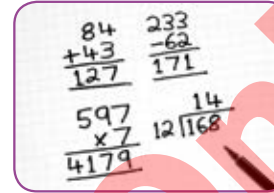
Today's computers can certainly do many amazing things. People always want more, though. That is why computer scientists are interested in quantum computers. Actually, scientists have been working with quantum computers for more than a decade. They are not quite ready to be sold in stores like laptop computers or smartphones, but progress is being made.

## Comprehension Questions

- How did computers change over the years after they were first made?
  - They became larger.
  - They became cheaper.
  - They became considerably slower.
  - All of the above
- A computer that is connected to the internet ...
  - is very useful.
  - is less useful.
  - is almost useless.
  - is without benefit.
- What is part of a Turing machine?
  - A black tape that moves parts in the machine
  - A device that reads symbols
  - A sphere with numbers on it
  - All of the above
- Which of the following was NOT mentioned as researching quantum computers?
  - D-Wave
  - Google
  - Students at universities
  - The US military
- A good skill for a quantum research scientist to have is ...
  - speaking skills.
  - writing skills.
  - researching skills.
  - All of the above

Key 1. (b) 2. (a) 3. (b) 4. (d) 5. (d)

## Glossary



■ **calculate** (v.) to figure out using math



■ **communicator** (n.) a person who shares information with others



■ **considerably** (adv.) very; of a noticeable level or amount



■ **content** (n.) the subject or topic of a story, song, movie, etc.



■ **decade** (n.) ten years