

## The world's biggest supercomputer

### Elementary

#### 1 Warmer

Match these computer words with their meanings.

- |              |   |
|--------------|---|
| 1. processor | a. move information from the internet to your computer              |
| 2. data      | b. a set of information on a computer with its own name             |
| 3. download  | c. the part of a computer that controls and does all its operations |
| 4. file      | d. information in a form that a computer can use                    |

#### 2 Key words

Fill the gaps in the sentences with these key words from the text. The paragraph numbers are given to help you.

calculation    server    process    research    billion    cool    trillion

1. If computers \_\_\_\_\_ information, they use a program to organize it. (para 3)
2. A \_\_\_\_\_ is 1,000,000,000,000. (para 3)
3. A \_\_\_\_\_ is the use of mathematics to discover a number or an amount. For example,  $2 + 2 = 4$ . (para 3)
4. A \_\_\_\_\_ is a computer than controls all the computers in a network. (para 5)
5. If you \_\_\_\_\_ something, you make it colder. (para 5)
6. \_\_\_\_\_ is the detailed study of something in order to discover new facts. (para 6)
7. A \_\_\_\_\_ is 1,000,000,000. (para 6)

#### 3 Find the information

Find the following information in the text as quickly as possible.

1. When did Summit start working?
2. Where is it?
3. What was the fastest supercomputer in the world before Summit?
4. How many calculations can Summit process each second?
5. When did Titan start working?
6. How much water does Summit need each minute?

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5 July, 2018

- 1 How fast is your home computer? Does it sometimes take a long time to open a document or download a file? Maybe you should buy a supercomputer. It will be about one million times faster!
- 2 On 8 June, 2018, a supercomputer called Summit started working. Summit is the world's fastest supercomputer and is at the Oak Ridge National Laboratory in Tennessee in the USA. IBM developed it. Before Summit, the world's fastest supercomputer was China's Sunway supercomputer and the four most powerful supercomputers in the world were all Chinese.
- 3 Summit can process 200 thousand trillion calculations per second and can process 30 years of data in just one hour. Sunway processes 90,000 trillion calculations per second.
- 4 Before Summit, the fastest American supercomputer was Titan, which started working in 2012. It was the fifth fastest supercomputer in the world. Summit is eight times more powerful than Titan.
- 5 Summit has more than 4,600 servers and is bigger than two tennis courts. It has 37,000 processors and uses 15,000 litres of water a minute to cool those processors.
- 6 Scientists will use Summit for scientific and medical research. It is so powerful that it will be able to process billions of pieces of medical data and may be able to find cures for diseases such as cancer and Alzheimer's disease.
- 7 How long will Summit be the world's biggest and fastest supercomputer? The US is already building an even more powerful supercomputer, called Aurora. China, Japan and the European Union are also building new, more powerful supercomputers. The Chinese supercomputer will start working in 2020 so Summit will not be in first place for very long.

#### 4 Comprehension check

Match the beginnings to the endings to make statements about the text.

- |   |  |
|---|--|
| 1. It only takes one hour ...                         | a. ... for scientific research.                    |
| 2. The Chinese supercomputer, Sunway, ...             | b. ... bigger than two tennis courts.              |
| 3. The US is building ...                             | c. ... will start working in 2020.                 |
| 4. Summit is ...                                      | d. ... another supercomputer.                      |
| 5. Scientists will use Summit ...                     | e. ... for Summit to process thirty years of data. |
| 6. A new, bigger and faster Chinese supercomputer ... | f. ... is less powerful than Summit.               |

#### 5 Chunks

Rearrange the words to make phrases from the text.

1. faster million one about times
2. one just hour in
3. the world in the fastest fifth
4. powerful even an computer more

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#### 6 Two-word phrases

Match the words in the left-hand column with the words in the right-hand column to make expressions from the text.

- |                |             |
|----------------|-------------|
| 1. medical     | a. disease  |
| 2. Alzheimer's | b. court    |
| 3. tennis      | c. computer |
| 4. home        | d. research |

#### 7 Superlatives

Complete the table using words from the text.

|    | adjective | superlative |
|----|-----------|-------------|
| 1. | big       |             |
| 2. | fast      |             |
| 3. | powerful  |             |

#### 8 Discussion

- Will computers replace people one day? Why? Why not?

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#### KEY

#### 1 Warmer

1. c
2. d
3. a
4. b

#### 2 Key words

1. process
2. trillion
3. calculation
4. server
5. cool
6. research
7. billion

#### 3 Find the information

1. 8 June, 2018
2. (at the Oak Ridge National Laboratory) in Tennessee, USA
3. Sunway
4. 200,000 trillion
5. 2012
6. 15,000 litres

#### 4 Comprehension check

1. e
2. f
3. d
4. b
5. a
6. c

#### 5 Chunks

1. about one million times faster
2. in just one hour
3. the fifth fastest in the world
4. an even more powerful computer

#### 6 Two-word phrases

1. d
2. a
3. b
4. c

#### 7 Superlatives

1. the biggest
2. the fastest
3. the most powerful