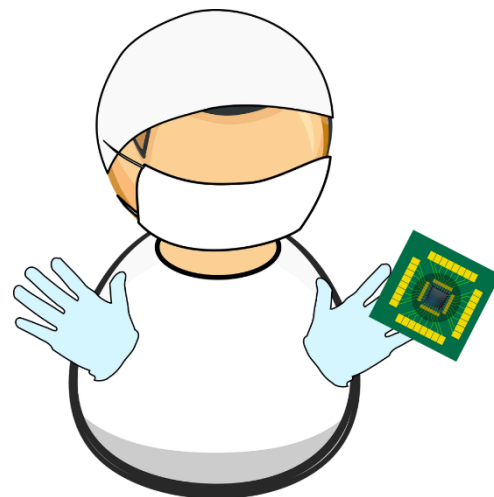


IBM has created a new computer chip that will **improve performance** by 50%. 50 billion **transistors** can be placed on a 2nm chip the size of a fingernail. Up to now IBM, has produced 7nm chips. More transistors, the basic parts of computer chips, lead to better performance.

**In addition**, the new chip uses up to 75% less energy. This will **increase** the battery life of cell phones dramatically. The chip is also expected to **boost** performance in **huge datacentres** that need a lot of power. Faster graphic cards and **speedier object detection** on cameras are other **effects** of the new chip. **Artificial intelligence**, which **relies heavily** on computing power, would profit massively from a new generation of chips.



**Even though** computer experts are excited about the new **development**, it will take a few years before the new chip can be **mass-produced**. This comes at a time when a **shortage** of computer chips has **hit** major **manufacturing** areas, including the automobile industry and smartphone production.

For years IBM has been **concentrating** on chip development and sold its chip production in 2014.

## Words

- **artificial intelligence** = the way computers do intelligent things that people can do, like thinking and making decisions
- **boost** = increase, make better
- **concentrate** = focus on
- **datacentre** = large building with many computers
- **development** = making a new product
- **effects** = results
- **even though** = while
- **heavily** = a lot
- **hit** = affect
- **huge** = very large
- **improve** = to make better
- **increase** = improve, to make better
- **in addition** = also
- **manufacturing** = production
- **mass-produced** = to make something cheaply in large numbers
- **nanometre** = **nm** = one billionth of a metre
- **object detection** = the way you find and identify an object or person
- **performance** = how well something works
- **rely on** = need
- **shortage** = not enough
- **speedier** = faster
- **transistor** = a very small object that controls the flow of electricity

Answer the following questions.

1. By which factor will IBM's new computer chip improve performance? \_\_\_\_\_  
\_\_\_\_\_
2. How large is the new IBM chip? \_\_\_\_\_
3. How will the new chip affect the battery life of cell phones? \_\_\_\_\_  
\_\_\_\_\_
4. Name at least two other areas that will profit from the new chip? \_\_\_\_\_  
\_\_\_\_\_
5. When can the new chip be produced for commercial use? \_\_\_\_\_
6. Which manufacturing sectors are suffering from a shortage of computer chips? \_\_\_\_\_  
\_\_\_\_\_
7. What is IBM concentrating on instead of producing chips? \_\_\_\_\_  
\_\_\_\_\_

Match the sentence beginnings with the endings. There are TWO endings you will not need.

<b>1</b>	IBM's new chip can	<b>A</b>	will take a few years to achieve
<b>2</b>	In addition to more power	<b>B</b>	is IBM's main area of business
<b>3</b>	Graphic cards and detecting objects	<b>C</b>	improve performance by 50%
<b>4</b>	Mass production of the new chip	<b>D</b>	are areas where the new chip can be used.
<b>5</b>	The car industry and smartphone production	<b>E</b>	will start within the next few years
<b>6</b>	The development of computer chips	<b>F</b>	the chip also uses less energy
		<b>G</b>	work with fewer transistors
		<b>H</b>	are suffering from a shortage of computer chips

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

Complete the text by filling in the missing words from the box on the right. There are **THREE** words you will not need.

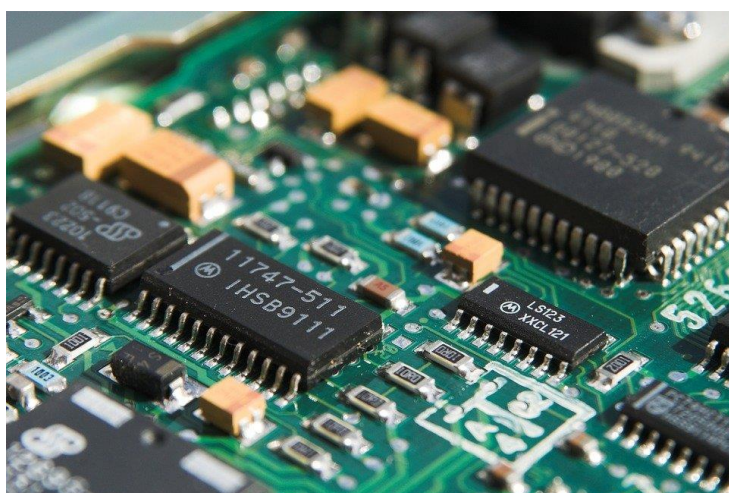
IBM has created a new computer chip that will **(1)** \_\_\_\_\_ performance by 50%. 50 billion transistors can be **(2)** \_\_\_\_\_ on a 2nm chip the size of a fingernail. Up to now IBM, has produced 7nm chips. More **(3)** \_\_\_\_\_, the basic parts of computer chips, lead to better performance.

In addition, the new chip uses up to 75% less **(4)** \_\_\_\_\_. This will increase the **(5)** \_\_\_\_\_ life of cell phones dramatically. The chip is also expected to boost **(6)** \_\_\_\_\_ in huge datacentres that need a lot of power. Faster graphic cards and speedier object **(7)** \_\_\_\_\_ on cameras are other effects of the new chip. Artificial intelligence, which **(8)** \_\_\_\_\_ heavily on computing power, would profit massively from a new **(9)** \_\_\_\_\_ of chips.

Even though computer experts are excited about the new **(10)** \_\_\_\_\_, it will take a few years before the new chip can be mass-produced. This comes at a time when a **(11)** \_\_\_\_\_ of computer chips has hit major manufacturing areas, including the automobile industry and smartphone production.

For years IBM has been **(12)** \_\_\_\_\_ on chip development and sold its chip production in 2014.

battery  
concentrating  
detection  
development  
energy  
improve  
generation  
graphic  
loss  
performance  
placed  
relies  
shortage  
size  
transistors



**KEY**

**Answer the following questions.**

1. 50 percent / half
2. 2 nm / 2 nanometres
3. increase battery life / use less energy
4. datacentres / object detection / artificial intelligence
5. not until a few years / in a few years
6. automobile industry / smartphone production
7. development (of chips)

**Match the sentence beginnings with the endings. There are TWO endings you will not need.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
C	F	D	A	H	B

**Complete the text by filling in the missing words from the box on the right. There are THREE words you will not need.**

IBM has created a new computer chip that will **(1) improve** performance by 50%. 50 billion transistors can be **(2) placed** on a 2nm chip the size of a fingernail. Up to now IBM, has produced 7nm chips. More **(3) transistors**, the basic parts of computer chips, lead to better performance.

In addition, the new chip uses up to 75% less **(4) energy**. This will increase the **(5) battery** life of cell phones dramatically. The chip is also expected to boost **(6) performance** in huge datacentres that need a lot of power. Faster graphic cards and speedier object **(7) detection** on cameras are other effects of the new chip. Artificial intelligence, which **(8) relies** heavily on computing power, would profit massively from a new **(9) generation** of chips.

Even though computer experts are excited about the new **(10) development**, it will take a few years before the new chip can be mass-produced. This comes at a time when a **(11) shortage** of computer chips has hit major manufacturing areas, including the automobile industry and smartphone production.

For years IBM has been **(12) concentrating** on chip development and sold its chip production in 2014.