Ancient China-Inventions
Document Based Question

The question is based on the accompanying documents on the following pages. This question is designed to test your ability to work with historical documents. Some of these have been edited for the purpose of this task. As you analyze the documents, take into account both the source of the document and any point of view that may be presented in the document.

Directions:
- Analyze the documents and answer the questions that follow each document.
- Read the essay question and plan your essay using the outline provided.
- Write a well-organized essay that includes an introductory paragraph, a body with several paragraphs explaining and supporting your answer, and a concluding paragraph.
- Use evidence from the documents to support your essay.
- Include specific related outside information in your essay.

Historical Context:
Some of the world’s greatest inventions came from China. Throughout its imperial history, emperors encouraged the development of science and technology, and for centuries China led other nations in these areas. The world is forever in debt to China for its innovations. Ancient China was extremely advanced and its discoveries are still in use today in cultures all over the world.

Task:
For Part A, read each document carefully and answer the question or questions after each document. Then read the directions for Part B and write your essay.

For Part B, use your answers from Part A, information from the documents, and your knowledge of social studies to write a well-organized essay. In the essay you will be asked to:

- Describe three ancient Chinese inventions that have influenced the world today.
- Explain the significant impact each of these inventions had on the world.
PART A

The documents that follow relate information about China. Examine each document carefully and then answer the question(s) that follow it using complete sentences. These answers will help you in Part B.

Document 1

![Diagram of time lag between some Chinese inventions and their adoption in the West]

*The dot represents the date of inventions and the bar represents the time it took to be adopted in the West (Europe).

1. Which invention took the least amount of time to be adopted by the West? _________

2. Why might it have taken hundreds of years for an invention to be adopted by the West?

   __________________________________________________________________________________________

   [1]
Chinese legend tells that the new invention of paper was presented to the Emperor in the year 105 AD by Cai Lun. Archaeological evidence, however, shows that paper was in use two hundred years before then. Either way, the Chinese were significantly ahead of the rest of the world. The craft of papermaking relied upon a lot of bamboo fiber to produce a fine quality paper.

Chinese papermakers used paper molds like this one, which consists of a fine bamboo screen set in a wooden frame. The mold was dipped into a vat of mushy pulp and shaken gently to settle the fibers onto the screen. The screen was then taken out and pressed to remove the excess water before being left to dry.

1. What natural material did the Ancient Chinese use to make their paper? 

2. What is one advantage of using paper for writing?
Paper and printing were possibly the most important Chinese inventions. The Chinese invention of moveable type, credited to Bi Sheng in the year 1045 AD, did not significantly change Chinese society. Three hundred years later in Europe, Gutenberg’s development of moveable type changed the Western world. Why? The Chinese language uses 3000 to 5000 characters in an average newspaper. The English language, in comparison, uses 26 characters in an average newspaper. Clearly, moving 5,000 characters on a printing press took much longer than moving 26. Still, the invention of moveable type furthered Chinese technology and its role in the advancement of human civilization. Large-scale printing in the 10th century made books readily available in China for the first time. The spread of books greatly increased the spread of literacy (ability to read and write). When books could be made faster, they became cheaper and even the average person could afford them. This led to increased knowledge for human civilization overall and, therefore, more technology and inventions.

1. What are possibly the most important Chinese inventions? ________________________
   ______________________________________________________ [1]

2. Why did the invention of printing not have a significant impact on Chinese society like
   the printing press invented in Europe did? ________________________
   ______________________________________________________ [1]

3. What is one way the spread of books and literacy changed human civilization forever?
   ______________________________________________________ [2]
By the third century AD, Chinese scientists had studied and learned much about magnetism in nature. For example, they knew that iron ore, called magnetite, tended to align itself in a North/South position. Scientists learned to "make magnets" by heating pieces of ore to red-hot temperatures and then cooling the pieces in a North/South position. The magnet was then placed on a piece of reed and floated in a bowl of water marked with directional bearings. These first navigational compasses were widely used on Chinese ships by the eleventh century AD. The invention of the compass largely helped the explorers during the Middle Ages discover the Western Hemisphere of the world.

These 19th century compasses are from the port of Canton:

1. What is another name for iron ore? _______________________________________________________________________________________[1]

2. Based on your knowledge of the Earth, why did iron ore tend to align itself in a North/South position? 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3. Name one impact the invention of the compass had on the world. _____________________________________________________________________________________________________________________________[2]
Document 5

Chinese alchemists discovered gunpowder in the 8th century A.D. while they were carrying out experiments to find the elixir of life. They discovered that an explosive mixture could be produced by combining sulfur, charcoal, and saltpeter (potassium nitrate). The military applications were clear. New weapons were rapidly developed, including rockets and others that were launched from a bamboo tube. By the 10th century, gunpowder was being used to make fireworks and weapons. The Song army used guns against the invading Mongols in the early 13th century, but they were eventually overpowered by the greater might of the Mongol empire. The idea of guns spread to Europe and were important weapons in Europe's conquest of the Western Hemisphere.


2. How did the invention of gunpowder impact the world? [2]
Document 6

The discovery of the kite that could fly in the air by the Chinese started humans thinking about flying. Kites had many different purposes in China. They were used in religious ceremonies. Of course, many colorful kites were built for fun, also. More sophisticated kites were used to test weather conditions or were used in wartime. As early as 1232 kites with messages were flown over Mongol enemy lines. The strings were cut and the kites landed among the Chinese prisoners, telling them to revolt and escape. Kites fitted with hooks and bait were used for fishing, and kites were fitted with strings and whistles to make musical sounds while flying. The kite was first mentioned in Europe in a popular book of marvels and tricks in 1589. Kites have been important to the invention of flight because they were the forerunner to balloons and gliders.

1. What are two ways the kite was used in ancient China? ____________________________
   ____________________________________________________________________________
   ____________________________________________________________________________[2]

2. Why did the invention of the kite have an impact on the world hundreds of years after it was first invented? ____________________________
   ____________________________________________________________________________
   ____________________________________________________________________________[2]
The Silk Road, a series of trade routes that ran from northern China across Asia, took its name from China’s most successful export. From the Shang empire onward, the Chinese exported fine silk cloth to Asia and Europe. The Romans knew China as Serica, which means "Land of Silk." Silk was cultivated perhaps as early as 5,000B.C. The secret of silk making was eventually smuggled out of China, but the Chinese remained the major exporters of silk to the West until the 19th century.

More than just silk was traded on the Silk Road. Chinese merchants amassed large fortunes by exporting luxury goods such as tea, spices, porcelain, and lacquerware. In addition, through travels across Europe, many ideas were spread. Marco Polo (1254-1324) was an Italian merchant who traveled to China by way of the Silk Road. After his return to Italy, he wrote his famous Travels of Marco Polo. This book gave Europe its first glimpse of the fabulous wealth and culture of the Chinese empire.

1. What invention was China’s most successful export along the Silk Road? 

   [1]

2. Why did the Chinese want to keep the methods of making silk a secret?

   [1]

3. What impact did the Silk Road have on Europe?

   [2]
PART B

Write a well-organized essay that includes an introduction, several paragraphs, and a conclusion. Use evidence from at least four documents in the body of the essay. Support your response with relevant facts, examples, and details. Include relevant outside information.

Historical Context:
Some of the world’s greatest inventions came from China. Throughout its imperial history, emperors encouraged the development of science and technology, and for centuries China led other nations in these areas. The world is forever in debt to China for its innovations. Ancient China was extremely advanced and its discoveries are still in use today in cultures all over the world.

Task:
Using information from the documents and your knowledge of social studies, write an essay in which you:

- Describe three ancient Chinese inventions that have influenced the world today
- Explain the significant impact each of these inventions had on the world.

Guidelines:

In your essay, be sure to:
- Address all aspects of the Task by accurately analyzing and interpreting at least four documents
- Incorporate information from the documents in the body of the essay
- Incorporate relevant outside information
- Support the theme with relevant facts, examples, and details
- Use a logical and clear plan of organization
- Introduce the theme and conclude with a summation of the theme