Read the article “Written in Stone” before answering Numbers 1 through 5.

Written in Stone

People need to communicate. The earliest human beings most likely communicated with sounds and gestures. Eventually, groups of people developed languages, which have the ability to express long or complicated messages that people cannot get across by just making sounds or by pointing. With language, people can have dialogues in which they communicate back and forth.

As cultures grew in different parts of the world, people needed to communicate in a different way. Because people were trading goods with each other, spoken language was not enough to answer every question or settle every dispute. People began to write.

The Earliest Writing

Some of the earliest known writing was found in Egypt. It was a list of items delivered to a temple, written on bone and ivory and using Egyptian hieroglyphs, or symbols that represented consonants. It dates back to about 3200 B.C.

At about the same time, the ancient Sumerians were drawing pictures of animals on wet clay. These symbols represented syllables. The clay, left to bake in the sun, would then become a permanent record of the temple’s goods.

For thousands of years, people continued to draw pictures on stone and make marks in clay. Eventually, the heavy clay and stone tablets became a nuisance, so people developed ways to make writing more portable. They began writing on papyrus or parchment so that records could be easily transported. Historians believe that people did all of this so that they could better communicate with one another and to pass their history down to future generations.

As cultures became more complex, people began trading over longer and longer distances. The Phoenicians, for example, navigated long distances overseas to trade ivory and cedar. They developed a new way of writing. It was based on something similar to words rather than pictures. Our modern phonics and phonetics have roots in this method of writing.
Changing—and Dying Out?

*Linguists*, people who study language, can tell you that languages change. If you looked at something written in English 400 years ago, you would be surprised at how difficult it is to read. The structure of the language was different. Some of the words look familiar, but many seem strange. The shape of some old English letters are very different from the way you learned to write them.

Languages can also disappear. A language or a form of writing dies out when there are no longer enough people who understand and use it. This happened to the ancient Egyptian hieroglyphs. The Egyptians covered the walls of their immense temples and tombs with stories about their gods, goddesses, and pharaohs. But by the fifth century A.D., hardly anyone could read these hieroglyphs.

Most scholars believed that hieroglyphs were just pictures. They thought each symbol stood for an idea or a thing. But when the Rosetta Stone was found in 1799, clues started to fall into place. The Rosetta Stone is a tablet on which information was written in three different forms: in hieroglyphs, in an Egyptian script, and in Greek. By studying the tablet, experts could begin to understand the ancient writing. In 1822, a young Frenchman named Jean François Champollion figured out that almost all the hieroglyphs stood for sounds, not ideas or things.

Language is still changing. Much of our writing is done on computers or other electronic devices. Some people predicted that our use of paper would die out as computers took over, and that we would live in a paperless world. That prediction has not yet come true—we still put a lot of our writing on paper. Even though electronic books, magazines, and newspapers may now be available, paper will be with us for a long, long time to come.
Now answer Numbers 1 through 5. Base your answers on “Written in Stone.”

1. Read the paragraph from the text. Underline the sentence that best states the problem.

People need to communicate. The earliest human beings most likely communicated with sounds and gestures. Eventually, groups of people developed languages, which have the ability to express long or complicated messages that people cannot get across by just making sounds or by pointing. With language, people can have dialogues in which they communicate back and forth.

2. This question has two parts. First, answer part A. Then, answer part B.

Part A: How does the author help the reader understand the origin of writing?
A. by explaining that heavy tablets were causing problems
B. by explaining problems that spoken language could not solve
C. by explaining how writing prevented languages from dying out
D. by explaining that scholars had difficulty understanding early writing

Part B: Which sentence from the article best supports your answer in part A?
A. “Because people were trading goods with each other, spoken language was not enough to answer every question or settle every dispute.”
B. “As cultures became more complex, people began trading over longer and longer distances.”
C. “Linguists, people who study language, can tell you that languages change.”
D. “The shape of some old English letters are very different from the way you learned to write them.”
This question has two parts. First, answer part A. Then, answer part B.

**Part A:** Read the sentence from the article.

Eventually, the heavy clay and stone tablets became a nuisance, so people developed ways to make writing more portable.

The origin of the word portable is the Latin root *port*, meaning “to carry.” What does this suggest about portable writing?

A. It is easy to read.
B. It is easy to deliver.
C. It is used to impress people.
D. It is displayed in public places.

**Part B:** Which other word from the article includes the Latin root *port*?

A. represented
B. permanent
C. parchment
D. transported
4. Select two statements from the article that best show the author’s point of view.

A. “Some of the earliest known writing was found in Egypt.”
B. “For thousands of years, people continued to draw pictures on stone and make marks in clay.”
C. “If you looked at something written in English 400 years ago, you would be surprised at how difficult it is to read.”
D. “A language or a form of writing dies out when there are no longer enough people who understand and use it.”
E. “Most scholars believed that hieroglyphs were just pictures.”
F. “Even though electronic books, magazines, and newspapers may now be available, paper will be with us for a long, long time to come.”

5. Read the sentence from the article.

The Phoenicians, for example, navigated long distances overseas to trade ivory and cedar.

The origin of the word navigated is the Latin root nav, meaning “ship.” What does this suggest about the word navigated?

A. It is related to trade.
B. It is related to work.
C. It is related to travel.
D. It is related to books.
Navigating the Seas

Have you ever thought about how ships make their way across Earth’s oceans? They sail from port to port, delivering goods or taking passengers to distant locations. Today’s mariners, or sailors, have many instruments and systems to help them set their courses and reach their destinations safely. But early mariners did not have modern devices to guide them.

Most of what we know about early navigation comes from the past five or six thousand years, when the first trade boats were constructed. These vessels were big enough to carry goods as well as people needed to sail the ship.

People from the island of Cyprus, in the Mediterranean Sea, traded copper by ship as early as 3000 B.C. By 1000 B.C., Cornwall, in what is now England, was trading tin. The Phoenicians sold carved cedar wood and ivory. These people all traded with each other. They also traded with the Egyptians and other people along the Mediterranean.

To find their way to distant harbors and to people who wanted to import their goods, traders stayed close to shore. Mariners would tell each other what they knew about trade routes. Directions from port to port may have sounded something like this: “Sail east along the coast for many days until you reach the mouth of a great river.” Navigators noted rivers, mountains, and other natural features to mark their way. They located their position by following these landmarks.

Ships were not indestructible, and sailing close to shore carried grave risks. There were many shipwrecks in shallow waters, so mariners learned to use lead lines. A piece of lead was tied to a rope. The rope, marked at regular points, was lowered into the water until the lead hit bottom. Then the line was pulled up. Mariners counted the markings on the wet part of the rope to find out how deep the water was. Then they knew whether the area was safe to travel.
The magnetic compass was a big advance in navigation. Mariners magnetized an iron needle by rubbing it on a lodestone, a naturally magnetic rock. They put the needle in a piece of straw so it would float and placed it in a bowl of water. The needle would always point toward Earth’s magnetic north pole. Mariners compared the needle’s point to their direction of travel. Then, they could tell which way they were headed.

No one knows who made the first sea maps, called portolan charts. Some believe they came from Spain, Italy, or Portugal. These charts showed the locations of harbors, compass directions, and common winds. Many included drawings of sea monsters popular in mythology at the time.

As useful as lead lines and portolan charts were, they could not help mariners cross the open ocean. For that, the logical solution was to put the stars to work. Enter the mariner’s astrolabe.

The mariner’s astrolabe was a tool for measuring the positions of stars in the sky, as well as their altitude. It also measured the altitude of the sun at noon. With these altitudes and information found in star charts, or maps of the night sky, mariners could determine their north-south location in the ocean. The astrolabe could not, however, tell them how far east or west they were. A device called the chronometer solved that problem.

The chronometer was a fancy clock that kept very accurate time. On board a ship, it told mariners the time at the port where they had started. As the ship traveled east or west, the local time would get earlier or later. Mariners could find the local time wherever they were by using the position of the sun in the sky. By comparing the local time with the time kept by the chronometer, they could calculate how far east or west they had gone.

Today, we have advanced instruments that can tell our exact position on Earth’s surface at any time. The tools used by early mariners may seem very old-fashioned. But without them, people would never have found their way across the seas.
Now answer Numbers 6 through 10. Base your answers on “Navigating the Seas.”

6. Read the sentence from the article.

Ships were not **indestructible**, and sailing close to shore carried grave risks.

The origin of the word **indestructible** is the Latin root *struct*, meaning “build.”

What does the word **indestructible** mean?

A. unable to be guided into port
B. unable to be put back together
C. unable to be broken into pieces
D. unable to be sailed across oceans

7. Which problem did mariners face when they stayed close to shore?

A. Their ships were at risk in shallow waters.
B. They could not follow familiar landmarks.
C. Their ships could not carry goods and people.
D. They had to tell each other about trade routes.
This question has two parts. First, answer part A. Then, answer part B.

**Part A:** How does the author help readers understand the importance of lead lines?

- A by comparing lead lines with other navigation tools
- B by stating the serious problem that lead lines solved
- C by explaining the effect lead lines had on navigation
- D by describing the steps for using lead lines in sequence

**Part B:** Which sentence from the text best supports your answer in part A?

- A “Navigators noted rivers, mountains, and other natural features to mark their way.”
- B “There were many shipwrecks in shallow waters, so mariners learned to use *lead lines.*”
- C “Mariners magnetized an iron needle by rubbing it on a *lodestone,* a naturally magnetic rock.”
- D “Many included drawings of sea monsters popular in mythology at the time.”

Select three solutions for crossing the open ocean.

- A lead lines
- B star charts
- C compasses
- D chronometer
- E portolan charts
- F mariner’s astrolabe
Read the sentences from the article. For each underlined word, write the correct Latin root and its meaning in the chart. Select from the choices in the box below.

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Latin Root</th>
<th>Root Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>“To find their way to distant harbors and to people who wanted to import their goods, traders stayed close to shore.”</td>
<td>nav</td>
<td>build</td>
</tr>
<tr>
<td>“Navigators noted rivers, mountains, and other natural features to mark their way.”</td>
<td>port</td>
<td>carry</td>
</tr>
<tr>
<td>“Most of what we know about early navigation comes from the past five or six thousand years, when the first trade boats were constructed.”</td>
<td>struct</td>
<td>ship</td>
</tr>
</tbody>
</table>

Roots:
- nav
- port
- struct

Root Meaning:
- build
- carry
- ship
Now answer Number 11. Base your answer on “Written in Stone” and “Navigating the Seas.”

11 In “Written in Stone” and in “Navigating the Seas,” new tools and methods were created to solve problems that people were facing. Explain how writing and sailing became easier over time due to solutions that people created. Support your answer with details from both texts.