

Name _____

Date _____

Thomas Edison & Grit - Answer Key

Use the text to answer each question below.

1. Thomas Alva Edison was born on February 11, 1847, in Milan, Ohio. Early in his life, Edison suffered ear infections and a fever that damaged his hearing. In 1854, his family moved to Port Huron, Michigan. Because Edison had trouble concentrating in school, his mother decided to teach him at home. Edison loved to read, and he read books on all different topics. He became an independent learner, which helped him succeed as an inventor. When he was 12, Edison began selling newspapers to train passengers on a nearby railroad line. One day, Edison saved a child from being run over by a train. As a reward, the child's father taught Edison to use a new device: the telegraph.

According to the passage, why did Edison's mother teach him at home?

- A.** because he had trouble concentrating in class
- According to the passage, "Because Edison had trouble concentrating in school, his mother decided to teach him at home."*
- B.** because he did not like to read
- C.** because there were no schools in their new town
- D.** because he was injured in a train accident

2. The telegraph was developed in the 1800s. It is a device that can send and receive messages across long distances. Though it would later be replaced by the telephone, fax and internet, the telegraph revolutionized communication at the time. Messages were sent by telegraph with electrical signals in Morse code. In Morse code, a set of dots and dashes correspond to each letter of the English alphabet. At the age of 15, Thomas Edison began working as a telegraph operator. This sparked his lifelong interest in communication and technology. (In fact, Edison's oldest children were nicknamed "Dot" and "Dash"!)

Based on the passage, a message in Morse code

- A.** gives directions to computers.
- B.** can only be sent a few miles.
- C.** can be translated into English.
- According to the passage, "In Morse code, a set of dots and dashes correspond to each letter of the English alphabet." Therefore, a message sent in Morse code can be translated into English.*
- D.** cannot be sent by telegraph.

3. Today, Thomas Edison is well known for his inventions. But he was also a businessman. He envisioned not only new products, but also the markets where those products would sell. He was a hard worker, too, and always strived to improve things. Many of his most important contributions were not new inventions at all. Instead, they were modifications to existing technologies. Edison believed if there was a better way to do something, it was his job to find it. In his lab, a sign stated this motto for his employees to remember: "There's a better way; find it."

Based on the passage, which statement would Thomas Edison most likely agree with?

- A. If something isn't broken, don't try to improve it.
- B. If something isn't beautiful, it isn't useful.



C. Inventors should try to make things better.

According to the passage, "Edison believed if there was a better way to do something, it was his job to find it," and he put a sign in his lab for his employees with this motto: "There's a better way; find it."

D. Inventors should give up when they fail.

4. Edison traveled around the United States as a telegrapher for many years. During this time, improvements were made to the telegraph so that messages came in as sounds. Edison was partially deaf, and the work became harder for him. He started to focus more on inventing. In 1869, he left his job as a telegrapher to pursue inventing full-time. In 1877, Edison invented a device that improved the sound of the telephone. He also invented the phonograph, a device that recorded sounds and could play them back. People loved the phonograph, and it made a great deal of money. Edison's lab during these years was in Menlo Park, New Jersey. He became known in the newspapers as "The Wizard of Menlo Park."

Based on the passage, a phonograph can

- A. be used instead of a telephone.
- B. turn sound energy into light.
- C. turn telegraph messages into electric signals.



D. be used to play a recording of a song.

According to the passage, the phonograph is "a device that recorded sounds and could play them back." It can therefore be used to play a recording of a song.

5. One of Edison's patents was for the quadruplex telegraph system. This improvement to the telegraph let it transmit four messages at once. Previously, it could only send two. Edison held 1,093 patents in his life. A patent gives a person or team the rights to what they invent. It allows them to sell it. Patents often prevent other people, teams or companies from making money from someone else's idea. Edison's patented devices contributed to many different parts of life, including typewriting, storage batteries and motion pictures (also known as movies).

What is the meaning of "transmit" in the passage?

A. train



B.

send

According to the passage, Edison's "improvement to the telegraph let it transmit four messages at once. Previously, it could only send two." The detail "send" shows the meaning of "transmit."

C. turn on

D. own

6. There are many famous sayings attributed to Thomas Edison. In one quote, he defines genius as 1% inspiration and 99% perspiration. Perspiration is sweating, so this means that being a "genius" means sometimes having a good idea and, more importantly, working very hard. Versions of this saying were around before Edison popularized it. But whether or not he "invented" the saying, he certainly lived by it. Edison worked incredibly hard and saw failures as opportunities to try something else. He didn't always succeed, but he never gave up. And, according to some sources, he only slept four hours a night!

In the passage, what is the purpose of the underlined sentence?

A. to suggest that not everyone needs seven hours of sleep a night



B.

to suggest that Edison may have had little time to sleep because he worked so hard

According to the passage, "Edison worked incredibly hard" and "he never gave up." The underlined sentence suggests that he worked so hard that he may have "only slept four hours a night!"

C. to give one possible reason why Edison was always tired

D. to suggest that Edison may have had difficulty sleeping because he was often sick

7. Many people think that Thomas Edison *discovered* electricity or that he built the *first* light bulb. He did not, but his inventions did revolutionize the way electricity shaped people’s lives. The light bulbs that existed before Edison’s were not practical for most people to use inside their homes. His incandescent light bulb was affordable and reliable. It used less power than existing models and became a commercial success. There were other people working on light bulbs at the time, and this is where Edison’s skills as a businessman came in. He made some of those inventors his partners or bought the rights to their designs. He also created a system to supply electrical power into people’s homes: direct current. One of Edison’s biggest rivals was working on a competing system: alternate current. That rival was also a famous inventor named Nikola Tesla.

Based on this passage, Thomas Edison’s light bulb

- A. was not as bright as other light bulbs.
- B. was the first device to use electricity.
- C. cost too much money for most people to afford.
- D. made electricity more useful for people to use at home.

According to the passage, “The light bulbs that existed before Edison’s were not practical for most people to use inside their homes. His incandescent light bulb was affordable and reliable” and, he “did revolutionize the way electricity shaped people’s lives.” Based on these details, Edison’s light bulb made electricity more useful for people to use at home.

8. In his lab, Edison did not work alone. Edison employed many assistants, and his inventions were often the work of teams. Admiring Edison’s ^^perseverance^^, his employees also worked long hours to achieve their goals. Edison wanted his inventions to solve problems people had. He once said, “I find out what the world needs. Then I go ahead and try to invent it.” He believed that success meant being useful and that one sign of being useful was if a product sold. If people bought his products, he would know that they were a success.

Based on the passage, someone with perseverance would most likely

- A. try very hard to succeed.
- B. give up easily.
- C. work alone.
- D. buy a lot of products.

The passage states, “Admiring Edison’s perseverance, his employees also worked long hours to achieve their goals.” The details “also” and “worked long hours to achieve their goals” suggests that someone with perseverance would try very hard to succeed.

9. Edison had a vision for what success would look like, but he did not always succeed. Failure did not make him give up. On the contrary, failure made him try harder. He believed he could not know what would work until he discovered what would not, and failure was part of the process of experimentation. It took thousands of tries, for example, before he found the right material to use in his light bulb, and Edison learned from each of them. When asked once about his light bulb experiments, Edison responded, "I have not failed. I've just found 10,000 ways that won't work."

Why does the author quote Edison at the end of this passage?

- A. to clarify that Edison tried exactly 10,000 ways to build the light bulb
- B. to suggest that Edison was actually very stubborn
- C. to show that Edison often corrected people who asked him questions
- D. to describe Edison's view of failure in his own words

This passage is mostly about how Edison learned from failing. The author quotes Edison at the end of the passage to describe this view in Edison's own words: failing means finding "ways that won't work."

10. By the time of Edison's death in 1931, his inventions had dramatically changed people's lives. Electricity became a staple in people's homes. In tribute to him, electric lights were dimmed for one minute a few days after his death. Edison contributed to a range of fields. Many of his inventions were aimed at improving communication. His phonograph was a huge development in recorded audio, and his kinetograph and kinoscope were some of the earliest moving images. His ideas would go on to inspire inventors for years to come.

Which statement would the author of this passage most likely agree with?



A.

We should be grateful for Edison not only for what he invented but also because he inspired others to invent.

The author begins the passage noting that Edison's "inventions had dramatically changed people's lives" by the time of his death. The author closes with the statement that after Edison's death, "his ideas would go on to inspire inventors for years to come." Based on these details, the author would most likely agree that we should be thankful for Edison both for what he invented and for how he inspired others.

B. Edison is falsely credited for many products he did not invent.

C. Edison devoted too much time to improving communication and should have spent more time on other fields.

D. Electricity would have become a stable even without Edison's inventions.