

第5問 (配点 15)

In your English class, you will give a presentation about a great inventor. You found the following article and prepared notes for your presentation.

Who invented television? It is not an easy question to answer. In the early years of the 20th century, there was something called a mechanical television system, but it was not a success. Inventors were also competing to develop an electronic television system, which later became the basis of what we have today. In the US, there was a battle over the patent for the electronic television system, which attracted people's attention because it was between a young man and a giant corporation. This patent would give the inventor the official right to be the only person to develop, use, or sell the system.



Farnsworth in 1939

Philo Taylor Farnsworth was born in a log cabin in Utah in 1906. His family did not have electricity until he was 12 years old, and he was excited to find a generator—a machine that produces electricity—when they moved into a new home. He was very interested in mechanical and electrical technology, reading any information he could find on the subject. He would often repair the old generator and even changed his mother's hand-powered washing machine into an electricity-powered one.

One day, while working in his father's potato field, he looked behind him and saw all the straight parallel rows of soil that he had made. Suddenly, it occurred to him that it might be possible to create an electronic image on a screen using parallel lines, just like the rows in the field. In 1922, during the spring semester of his first year at high school, he presented this idea to his chemistry teacher, Justin Tolman, and asked for advice about his concept of an electronic television system. With sketches and diagrams on blackboards, he

showed the teacher how it might be accomplished, and Tolman encouraged him to develop his ideas.

On September 7, 1927, Farnsworth succeeded in sending his first electronic image. In the following years, he further improved the system so that it could successfully broadcast live images. The US government gave him a patent for this system in 1930.

However, Farnsworth was not the only one working on such a system. A giant company, RCA (Radio Corporation of America), also saw a bright future for television and did not want to miss the opportunity. They recruited Vladimir Zworykin, who had already worked on an electronic television system and had earned a patent as early as 1923. Yet, in 1931, they offered Farnsworth a large sum of money to sell them his patent as his system was superior to that of Zworykin's. He refused this offer, which started a patent war between Farnsworth and RCA.

The company took legal action against Farnsworth, claiming that Zworykin's 1923 patent had priority even though he had never made a working version of his system. Farnsworth lost the first two rounds of the court case. However, in the final round, the teacher who had copied Farnsworth's blackboard drawings gave evidence that Farnsworth did have the idea of an electronic television system at least a year before Zworykin's patent was issued. In 1934, a judge approved Farnsworth's patent claim on the strength of handwritten notes made by his old high school teacher, Tolman.

Farnsworth died in 1971 at the age of 64. He held about 300 US and foreign patents, mostly in radio and television, and in 1999, *TIME* magazine included Farnsworth in *Time 100: The Most Important People of the Century*. In an interview after his death, Farnsworth's wife Pem recalled Neil Armstrong's moon landing being broadcast. Watching the television with her, Farnsworth had said, "Pem, this has made it all worthwhile." His story will always be tied to his teenage dream of sending moving pictures through the air and those blackboard drawings at his high school.

Your presentation notes:

Philo Taylor Farnsworth (1906–1971)

— 30 —

Early Days

– born in a log cabin without electricity

– 31

– 32

Sequence of Key Events

33

34

Farnsworth successfully sent his first image.

35

36

↓ RCA took Farnsworth to court.

Outcome

– Farnsworth won the patent battle against RCA thanks to 37.

Achievements and Recognition

– Farnsworth had about 300 patents.

– *TIME* magazine listed him as one of the century's most important figures.

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問 1 Which is the best subtitle for your presentation?

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- ① A Young Inventor Against a Giant Company
- ② From High School Teacher to Successful Inventor
- ③ Never-Ending Passion for Generating Electricity
- ④ The Future of Electronic Television

問 2 Choose the best two options for 31 and 32 to complete Early Days. (The order does not matter.)

- ① bought a generator to provide his family with electricity
- ② built a log cabin that had electricity with the help of his father
- ③ enjoyed reading books on every subject in school
- ④ fixed and improved household equipment for his family
- ⑤ got the idea for an electronic television system while working in a field

問 3 Choose **four** out of the five events (①~⑤) in the order they happened to complete Sequence of Key Events.

33 → 34 → 35 → 36

- ① Farnsworth rejected RCA's offer.
- ② Farnsworth shared his idea with his high school teacher.
- ③ RCA won the first stage of the battle.
- ④ The US government gave Farnsworth the patent.
- ⑤ Zworykin was granted a patent for his television system.

問 4 Choose the best option for

37

 to complete Outcome.

- ① the acceptance of his rival's technological inferiority
- ② the financial assistance provided by Tolman
- ③ the sketches his teacher had kept for many years
- ④ the withdrawal of RCA from the battle

問 5 Choose the best option for

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 to complete Achievements and Recognition.

- ① He and his wife were given an award for their work with RCA.
- ② He appeared on TV when Armstrong's first moon landing was broadcast.
- ③ His invention has enabled us to watch historic events live.
- ④ Many teenagers have followed their dreams after watching him on TV.