

Name \_\_\_\_\_

Date \_\_\_\_\_

# Katherine Johnson - Answer Key

Use the text to answer each question below.

1. As a young child, Katherine Johnson was very interested in math. By her own description, she “counted everything.” Intelligent and hardworking, she wound up skipping several grades in school. Johnson’s father placed a lot of importance on his children’s education. In Johnson’s hometown of White Sulphur Springs, West Virginia, as in many other places at the time, African Americans like Johnson were not allowed to go to school past eighth grade. Johnson’s father moved the family 125 miles away so that she could continue on to attend high school, which she began at age 10.

According to the passage, what is one challenge Johnson faced as a child?

- A. She had difficulty understanding math concepts.
- B. Her father didn’t support her interest in mathematics.
- C. In her hometown, African Americans were not allowed to complete their education.
- D. There were no elementary schools in her hometown of White Sulphur Springs, WV.



*The sentence “In Johnson’s hometown of White Sulphur Springs, West Virginia, as in many other places at the time, African Americans like Johnson were not allowed to go to school past eighth grade” supports this answer.*

2. At 15, Johnson began college at West Virginia State University, where her professors recognized her mathematical abilities. One of these professors, W.W. Schiefflin Claytor, was the third African-American man to earn a doctoral degree in mathematics. Claytor told Johnson that she would make a good research mathematician and encouraged her to take many math classes, including a class he created specifically for her about the geometry of space. Johnson graduated college at 18 with degrees in mathematics and French. Despite her dreams of working in the mathematics field, women were limited to careers in teaching and nursing at the time. Johnson became a teacher.

Based on the passage, what is true about Johnson's life after college?

A. She got a job working as a research mathematician.



B.

She was not immediately able to pursue the career she most wanted.

*According to the passage, "Johnson graduated college at 18...Despite her dreams of working in the mathematics field, women were limited to careers in teaching and nursing at the time. Johnson became a teacher."*

C. She began teaching at West Virginia State University.

D. She started developing new theories about the geometry of space.

3. You've likely heard of NASA, the National Aeronautics and Space Administration. NASA is the government agency in charge of science and technology related to air and space. But you may not know that NASA used to be an organization called NACA. NASA originally began as the National Advisory Committee on Aeronautics (NACA), which was founded in 1915. By the start of World War I in 1914, the US was falling behind Europe in airplane technology. In response, NACA was founded to conduct research in aeronautics, the science of flight. Decades later, when space research began, NACA became the organization NASA.

Which statement best expresses the central idea of the passage?



A.

NASA started out as the organization NACA, which was founded to do flight research.

*This passage is mostly about the origin of NASA: the organization NACA, which was founded to conduct research in aeronautics, the science of flight. Details from the passage support this central idea.*

B. NACA was founded in 1915 to help the US keep up with other countries in flight technology.

C. Many people are familiar with the organization NASA.

D. The organizations NASA and NACA have similar names.

4. In 1935, NACA began hiring White women to measure, calculate and plot the results of flight tests run by the male engineers. These women often had degrees in math or science. Their job title was “computer.” (The modern electronic computers we’re familiar with didn’t yet exist.) An engineer is someone with scientific training who designs and builds complex products, machines, systems, or structures. The human computers’ work was very tedious and precise. It was done mostly by hand, using slide rules, curves, magnifying glasses, and basic calculating machines. The computers freed the engineers from having to do this time-consuming work. The engineers used the computers’ completed calculations to design additional tests. A computer job paid more than teaching or nursing. However, men with qualifications similar to the computers were often hired as junior engineers. “Junior engineer” was a higher-level job with a higher salary.

Which of the following best describes a computer at NACA in 1935?

- A. A man using information to design a flight test



B.

A woman doing precise calculations by hand

*According to the passage, NACA began hiring White women “to measure, calculate and plot the results of flight tests run by the male engineers...Their job title was ‘computer.’...The human computers’ work was very tedious and precise. It was done mostly by hand...”*

- C. An electronic machine that performed precise calculations

- D. A very high-level job that paid more than an engineering job

5. In December 1941, the US entered World War II. Millions of men went to serve in the war, creating a big shortage of workers at home. As a result, women had the opportunity to join the workforce in greater numbers. In June 1941, President Franklin Delano Roosevelt also issued Executive Order 8802. This order banned discrimination based on “race, creed, color or national origin” in the employment of government and defense workers. This meant that someone could not be turned down for this type of job because of the color of their skin, their beliefs or where they came from. NACA began recruiting Black women to work as computers, and Johnson joined in 1953.

Based on the passage, before 1941, the American workforce was made up mostly of { }.

- A. presidents

- B. White women

- C. Black women



D.

men

*According to the passage, in 1941, “millions of men” went to serve in World War II, which created “a big shortage of workers at home” and gave “women...new opportunities to join the workforce.” This shows that previous to 1941, the workforce was made up mostly of men.*

6. Though NACA opened up jobs to African Americans, the organization imposed the same racial segregation present in much of the US on its employees. In parts of the United States, laws kept Black and White people separate and provided Black people with inferior resources. Similarly, the Black computers at NACA had to work in a separate facility, away from the White computers. They had to use different bathrooms and cafeterias. In 1943, NACA constructed cheap housing for the White computers, but the Black computers were forced to find their own housing. Many White computers didn't even know that their African-American counterparts existed.

Which statement best expresses the central idea of the passage?

- ✓ A. Black and White people were segregated at NACA, as they were in other parts of the US.
- This passage is mostly about the segregation of Black and White people at NACA and how it was similar to the segregation present in much of the US. Details from the passage support this central idea.*
- B. There was more segregation at NACA than there was in other parts of the US.
- C. NACA constructed cheap housing for some of its employees.
- D. Black computers and White computers ate in separate cafeterias at NACA.

7. After a short time working as a computer in a large group of women, Johnson and a colleague were pulled out to work directly with an all-male team of engineers. Johnson's strong geometry skills proved very valuable to the team. The men grew to rely on her and never returned her to the larger group of computers. Johnson defied the expectation that women should simply work quietly. Always <sup>^^</sup>inquisitive<sup>^^</sup>, she asked questions to learn more about the projects she was working on. And when she noticed that women never went to the engineers' meetings, Johnson asked if there was a law preventing them from attending. When she learned that the answer was no, she attended the meetings.

What is the meaning of the word "inquisitive" in the passage above?

- A. Highly skilled at math
- ✓ B. Wanting to know more
- According to the passage, "Always inquisitive, [Johnson] asked questions to learn more about the projects she was working on." This detail shows that "inquisitive" means "wanting to know more."*
- C. Eager to work more
- D. Frequently relied upon

8. After World War II, the United States and the Soviet Union were locked in a struggle known as the Cold War. Though they did not directly fight against one another, the US and USSR had a tense, hostile relationship. The Space Race was a competition between these nations to explore space using satellites and spacecrafts. In October 1957, the Soviet Union ^^launched^^ the first artificial satellite, Sputnik. In response to the USSR’s achievements, President Dwight D. Eisenhower signed the National Aeronautics and Space Act in 1958. This law created NASA.

What is the meaning of the word “launched” in the passage above?

- A. Caused someone to be successful                      B. Made something available for the first time  
C. Sent into the air, water or outer space                      D. Threw in a forceful way



C.

Sent into the air, water or outer space

*According to the passage, “The Space Race was a competition between [the US and the Soviet Union] to explore space using satellites and spacecraft. In October 1957, the Soviet Union launched the first artificial satellite, Sputnik.” Details from these sentences like “explore space” show that the meaning of “satellite” in this passage is “sent into the air, water or outer space.”*