



NAME _____

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CLASS _____

NATIVE AMERICAN HERITAGE MONTH

Mary Golda Ross

Teacher, Mathematician, and Aerospace Engineer

Math That Flies

Mary Golda Ross was born in 1908 in Park Hill, Oklahoma. She was a citizen of the **Cherokee Nation**, and her great-grandfather was John Ross, a famous Cherokee chief. Mary loved math, and she earned a college degree in it when she was only 20 years old.

For about ten years Mary taught math and science in Oklahoma schools. Later she worked for the Bureau of Indian Affairs, first as a statistician and then as an advisor to girls at the Santa Fe Indian School in New Mexico. She kept studying too, and earned a master's degree in math.

In 1942 the Lockheed aircraft company hired Mary as a **mathematician**. She helped study problems the fast P-38 Lightning fighter plane ran into during high-speed dives. Lockheed asked her to stay on, and she took classes to become an **engineer**.

In 1952 Mary joined Lockheed's top-secret **Skunk Works** team. She was the only woman among its first group of about 40 engineers. She helped with plans for the Agena rocket and wrote about how spacecraft could travel to Mars and Venus. Much of her work was **classified** — kept secret for safety.

WORDS TO KNOW

- **mathematician:** A person who uses numbers, patterns and equations to solve problems.
- **engineer:** A person who uses science and math to design and build things that solve problems.
- **classified:** Kept secret by the government, so only certain people are allowed to know about it.

Part 1 • Reading Comprehension

1. What nation was Mary Golda Ross a citizen of, and who was her famous great-grandfather?

2. What job did Mary have for about ten years before she became an engineer?

3. What did Lockheed first hire Mary to do in 1942?

4. Why can't we read about everything Mary worked on at Skunk Works?

Part 2 • Math Challenge: Check the Numbers

Engineers like Mary check every number before anything flies. Solve these rocket problems. Show your work in the box.

1 A rocket climbs 5 kilometers every 10 seconds. How high is it after 60 seconds?

2 The first Skunk Works group had about 40 engineers, and Mary was the only woman. About how many were men?

3 Mary was born in 1908 and joined Lockheed in 1942. How old was she when she started?

Part 3 • Think About It

Mary was a teacher for many years before she became an engineer. How do you think being a teacher helped her do her engineering job?

