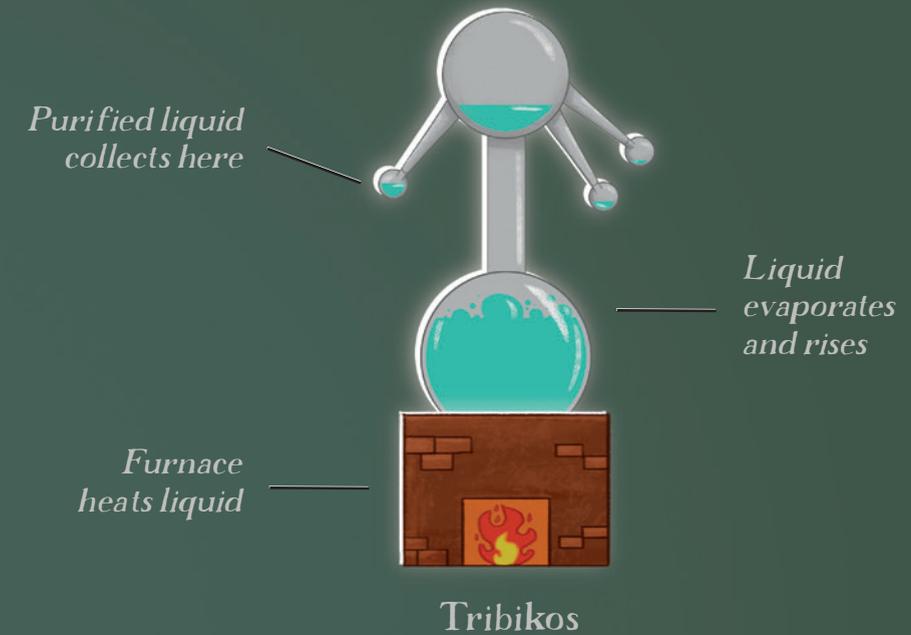




So engineers are inventors?



Engineers have been inventing for thousands of years.

Mary the Prophetess lived in Egypt nearly 2,000 years ago, and she loved experimenting with metals, liquids, and laboratory equipment. But the tools of the time were not advanced enough for her big ideas, so Mary invented her own—like the tribikos. Her inventions were important for alchemy, an early study of the natural world that led to modern chemistry.



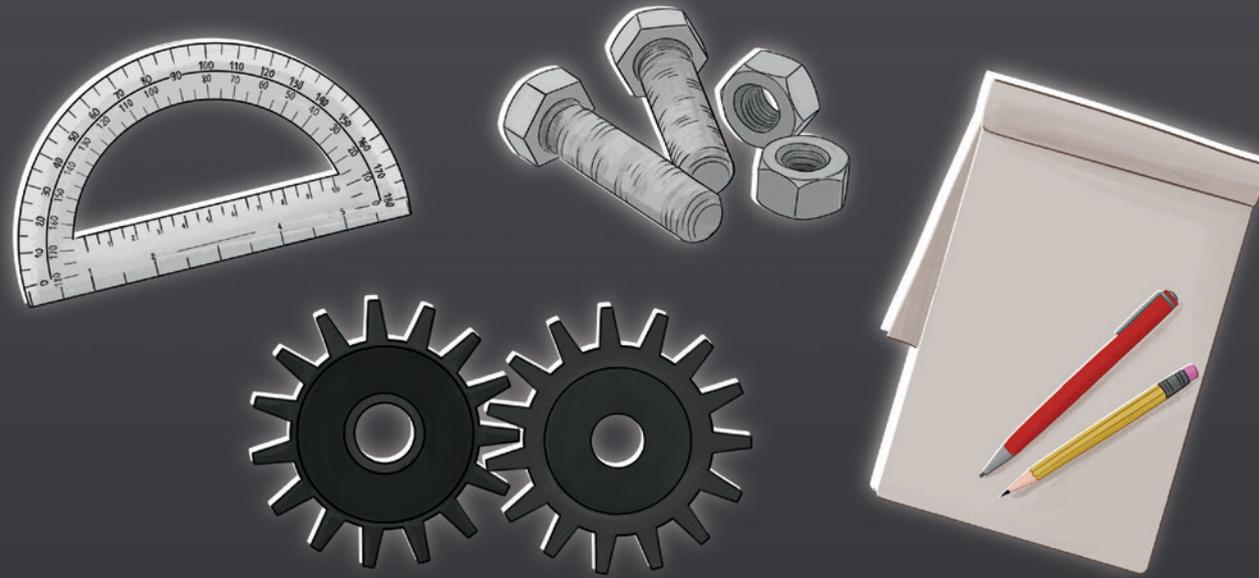
Mary's most famous invention is still used today: the heated water bath. The technology allows scientists to run experiments, helps factories produce food, and is also used in wastewater plants.

People even use heated water baths at home to soften wax for candles, melt chocolate for desserts, and slowly cook things like tasty cheesecakes. This invention is still called the *bain-marie*, meaning "Mary's bath."

Mary the Prophetess
[Mae-ree the Prah-fet-ess]
(Egypt, First Century CE)

Chemical Engineering



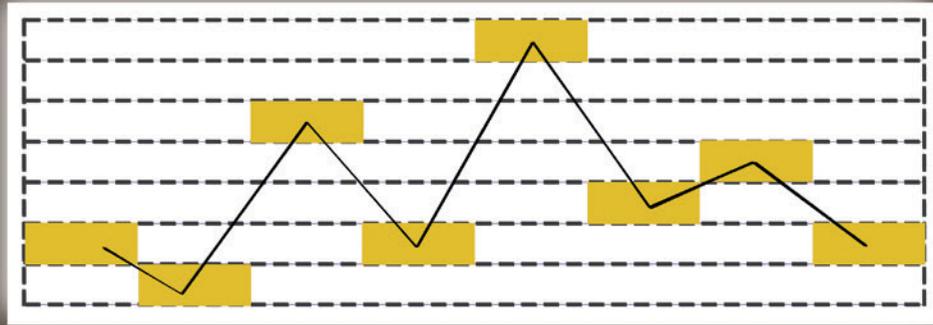


What else do engineers do?



Engineers think creatively.

When movie star Hedy Lamarr wasn't making films, she worked on projects in her laboratory. She had lots of ideas for inventions and experiments, such as making tablets that turned water into soda. Hedy also created designs for a more aerodynamic airplane, based on the smooth shape of fast birds and fish. She even kept a small laboratory in her on-set trailer so she could work between scenes.



Frequency Hopping

Then Hedy learned that important radio messages sent during World War II were being blocked, or “jammed.” It wasn’t long before she came up with an idea for a secret communication device. Her device could send the radio messages hopping around to different frequencies, making them impossible to find and jam.

She and a friend developed and patented the device, but most people laughed it off. Still determined to help, Hedy used her fame to raise millions of dollars for the war effort.



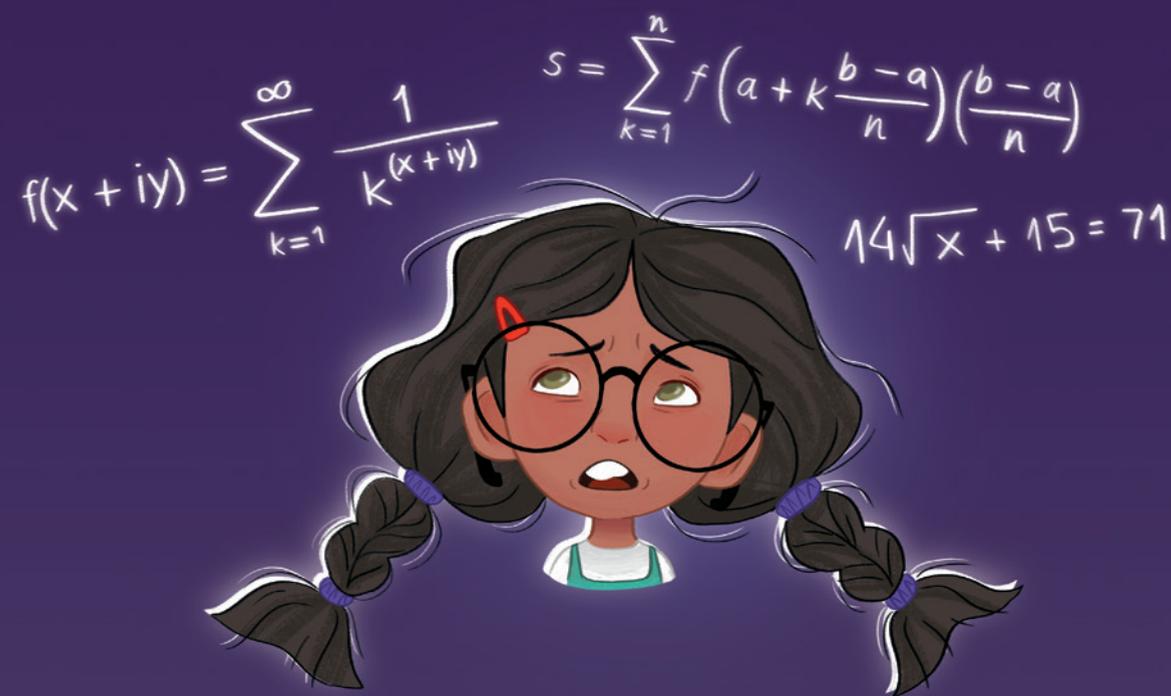
Hedy Lamarr
[Hed-ee La-mar]

(Austria & United States, 1914 – 2000)

Electrical Engineering



Later, her idea of frequency hopping was used when creating technologies like cell phones, Wi-Fi, Bluetooth, GPS, and even military communications. Hedy's work is especially important since we use these technologies in our daily lives and to solve our problems.



What other kinds of problems can engineering solve?