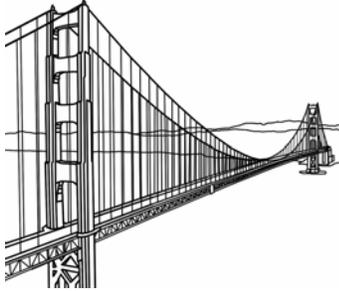


## THE GOLDEN GATE BRIDGE



The Golden Gate Bridge is a well-recognized landmark in the United States. It spans the Golden Gate Strait - a mile-wide stretch of water that connects the San Francisco Bay to the Pacific Ocean. The Golden Gate Bridge itself connects the city of San Francisco with Marin County on the other side of the Strait. The Golden Gate Bridge is one of the most beautiful bridges in the world. It is also one of the tallest.

The idea for a bridge across the strait had been around for many years, because San Francisco suffered from its isolated location. The only practical way to get across the San Francisco Bay was to take a ferry. Planning for the Golden Gate Bridge began in 1916, but the design underwent many changes before construction finally started in 1933.

Joseph Strauss was the chief engineer in charge of the bridge project. However, he had little experience with the construction of suspension bridges. For this reason, other engineers, architects, and designers made vital contributions to the design and construction of the bridge. For example, the bridge owes its art deco style and distinctive orange color (“international orange”) to the architects Irving and Gertrude Morrow. Charles Alton Ellis, an expert on structural design, was the main engineer on the project, and did much of the technical work necessary to build the bridge.

It was not easy to get the project started. Financing had to be found, and there was much opposition to the very idea of a bridge. The U.S. Navy, for example, feared that a bridge would obstruct ship traffic. The Southern Pacific Railroad, which ran the ferry fleets, feared competition from the bridge.

Many experts did not believe that it would be possible to build such a long bridge under such difficult circumstances. A suspension bridge of that length had never before been built. There are strong currents and heavy winds on the bridge site, which made construction dangerous.

The construction of the bridge finally began in 1933. The construction work set new standards for safety – workers were among the first required to wear hard hats, and an innovative safety net saved the lives of nineteen men while the bridge was built. The Golden Gate Bridge was completed in 1937, when the bridge opened to pedestrians. (It was opened to cars one year later.) The bridge was finished ahead of schedule and cost much less than originally budgeted.

Today, the Golden Gate Bridge has a main span of 4,200 feet (almost a mile) and a total length of 8,981 feet, or about 1.7 miles, making it one of the longest bridges in the world (it was the longest until 1964). The bridge is 90 feet wide, and its span is 220 feet above the water. The towers supporting the huge cables rise 746 feet above the waters of the Golden Gate Strait, making them 191 feet taller than the Washington Monument. Each steel cable is 7,650 feet long and has a diameter of 36 inches. About 40 million automobiles cross the bridge every year: proof that the bridge serves a vital function.

There are foghorns to let passing ships know where the bridge is, and aircraft beacons on the tops of the towers to prevent planes from crashing into them.

Because the Golden Gate Bridge is the first sight for many people arriving in the United States by ship, it is sometimes called the “Statue of Liberty” for the West Coast.

**ANSWER THE FOLLOWING QUESTIONS  
ABOUT *THE GOLDEN GATE BRIDGE***

1. The Golden Gate Bridge .....
  - a. spans the San Francisco Bay
  - b. is the best-known symbol of the United States
  - c. spans the Golden Gate Strait
  - d. is painted gold and has a gold-plated gate at each end
  
2. The idea for a bridge across the Golden Gate Strait .....
  - a. was first suggested in 1916
  - b. was perfected by Irving Morrow in 1933
  - c. was around for many years before construction started
  - d. was first put forth by Joseph Strauss
  
3. The bridge proponents wanted to.....
  - a. give the West Coast a new tourist attraction
  - b. connect San Francisco to the land across the Bay
  - c. prove that the innovative project could succeed
  - d. compete with the ferry fleets
  
4. Safety innovations during the construction of the bridge included
  - a. hardhats and a safety net
  - b. foghorns and radar
  - c. aircraft beacons
  - d. all of the above
  
5. Put the right pairs together:

a. 7,650 feet	e. length of bridge
b. 3 feet	f. length of main span
c. 4,200 feet	g. diameter of cable
d. 8,981 feet	h. length of cable
  
6. Before the Golden Gate Bridge was built, San Francisco suffered from transportation problems. Why were different people opposed to building the bridge?

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ANSWERS TO QUESTIONS  
ABOUT THE GOLDEN GATE BRIDGE

1. c
2. c
3. b
4. a
5. a-h, b-g, c-f, d-e
6. Many engineers doubted the bridge could be constructed. The US Navy feared it would obstruct ship traffic. The ferry operators feared the competition.