

Avengers Go To San Francisco



They have destroyed the Golden Gate Bridge in order to save the world.



Legos to the rescue



How Many Legos Are Required To Build The Golden State Bridge?

First, i need to find out the dimension of each component. The quantities I need are the average dimensions of a lego block and the volume of the Golden Gate bridge. I can use the dimensions of the lego block to get the volume and use that to find the number of legos needed.

Step 1

Dimensions of Lego Block (in meters)

Length: 0.0318

Width: 0.0158

Height: 0.0096

$$\text{Volume} = 4.823424 \times 10^{-6} \text{ m}^3$$

<http://www.robertcailliau.eu/Lego/Dimensions/zMeasurements-en.xhtml>

Step 2

Volume of Golden Gate Bridge (in cubic meters)

| Concrete Quantities | Cubic Meters |
|--------------------------------------|--------------|
| San Francisco Pier and Fender | 99,400 |
| Marin Pier | 18,000 |
| Anchorage, Pylons, and Cable Housing | 139,160 |
| Approaches | 21,800 |
| Paving | 19,115 |
| Total | 297,475 |

Step 3

Calculate Number Of Pieces

$$297475 \div (4.823424 \times 10^{-6}) = 61,672,994,120$$

We need 61,672,995,120 pieces of lego to construct the Golden Gate Bridge