

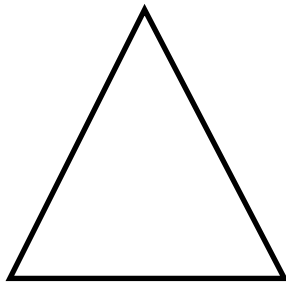


The Pyramids of Giza

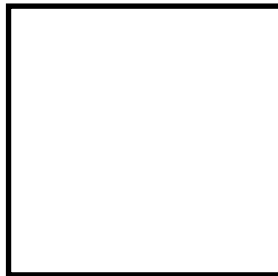
The Pyramids of Giza was completed in 2560BC and took nearly 20 years to be completed. They were built as a tomb for King Khufu. For many years it was also the tallest man made structure in the world consisting of over 2.3 million blocks! The Pyramids are still standing today and have also been through many earthquakes. This engineering design has proved to be successful!

Before we build a pyramid, lets look at the basic shapes in engineering first. Many of these shapes were also used by ancient engineers. Lets see if you can build these shapes and figure out which one is the strongest!

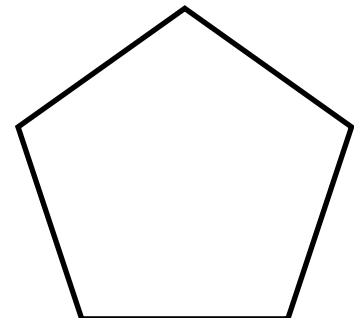
Using only the Lego Technic beams, build each shape and see which ones are the sturdiest.



Triangle



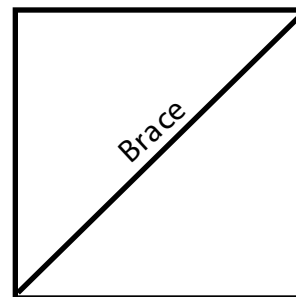
Square



Pentagon

Which shape did you find to be the sturdiest? _____

Now try to make the weak shapes more sturdy by bracing them. You can use another Technic beam to brace the structure. Usually when bracing is done correctly, a triangle will form inside the main structure. Here is one example to help you. Can you do the same for the pentagon?



Done with the challenges? Now its time to build a pyramid. A pyramid is a strong structure that has a square base and 3 triangular sides that meet at a point on top. Can you build one?