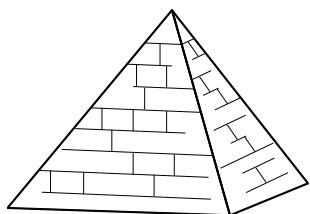


MATHCOUNTS[®] Problem of the Week Archive

Monumental Architecture – September 18, 2023

Problems

The Washington Monument in Washington, D.C. is an obelisk. An obelisk is a tall monument with four gently sloping sides and a pyramid shape on top. The obelisk structure first appeared in Ancient Egyptian architecture.



The Great Pyramid of Giza, another famous architectural design of the Ancient Egyptians, has a square base of side length 756 feet. The square base of the pyramid on top of the Washington Monument has side length 34 feet. The perimeter of the square base of the Great Pyramid is how many times bigger than the square base of the pyramid at the top of the Washington Monument? Express your answer to the nearest whole number.

The Washington Monument is 100 feet taller than the Great Pyramid of Giza. If the Washington Monument and the Great Pyramid each were 355 feet shorter, the Washington Monument would be twice as tall as the Great Pyramid. How many feet tall is the Washington Monument?

The entire Washington Monument is ten times as high as the pyramid on top. Based on the previous problem, if this pyramid was removed, how tall would the Washington Monument be? Express your answer to the nearest tenth of a foot.

