

Bridges that Don't Fall Down

Mel Griffin

Monique Lynch

Geometry Standards for Grades 6-8

Students should recognize and apply geometric ideas and relationships in areas outside the mathematics classroom, such as art, science, and everyday life.

Principles and Standards for School Mathematics

NCTM

Connections Standard for Grades 6-8

In grades 6-8 all students should recognize and apply mathematics in contexts outside mathematics.

Principles and Standards for School Mathematics

NCTM

Ponte Sant' Angelo

**Hadrian's
Tomb and
Bridge of
Angels**

**134 C.E.
Pedestrian
Crossing
Only**





Ponte Vittorio Emanuele II

**Built 1911
to allow
vehicular
crossing**



Ponte Vecchio

**Famous
Bridge in
Florence**

**Rebuilt in
1345 C.E.**



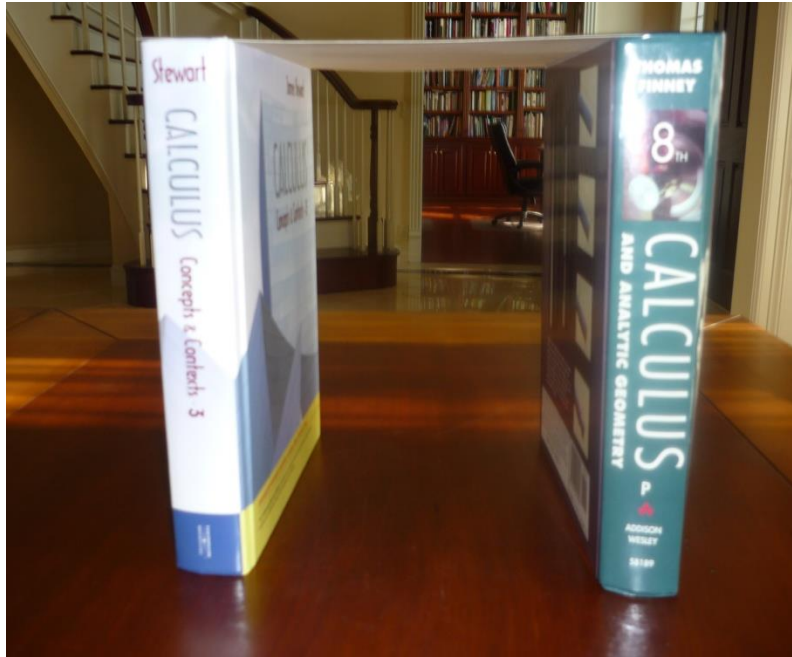
Modern and Ancient Bridge

**Notice the
different
geometries**

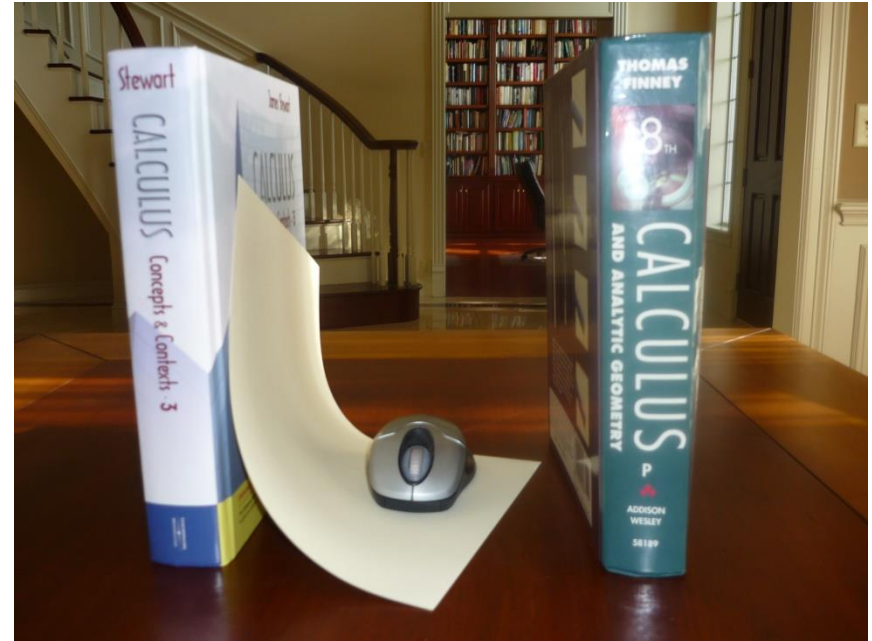




Bridge of One Sheet of Cardstock Paper



**Cardstock
Bridge**

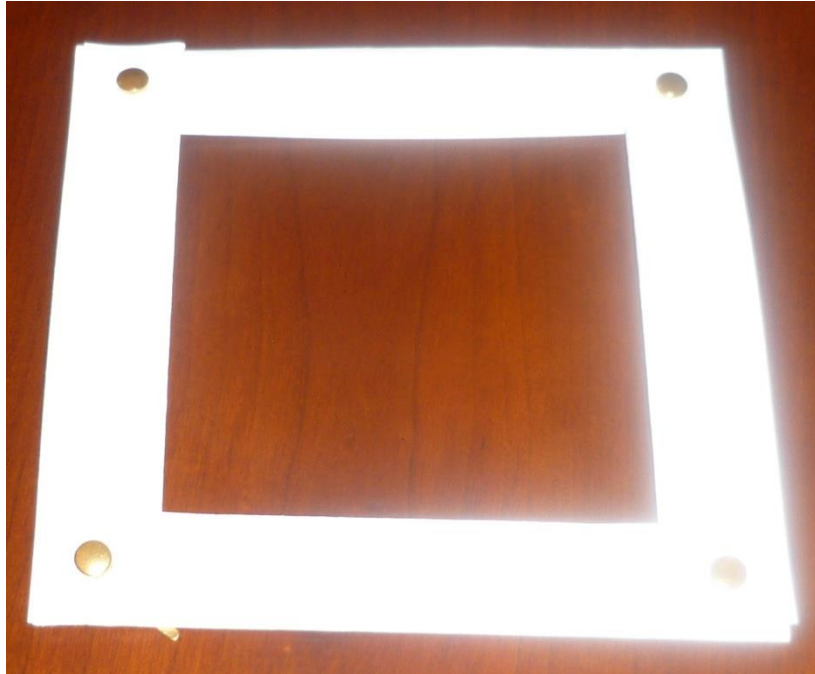


**Result of Placing
Computer Mouse on
Top of Bridge.**

Arched Bridge One Sheet of Cardstock Paper

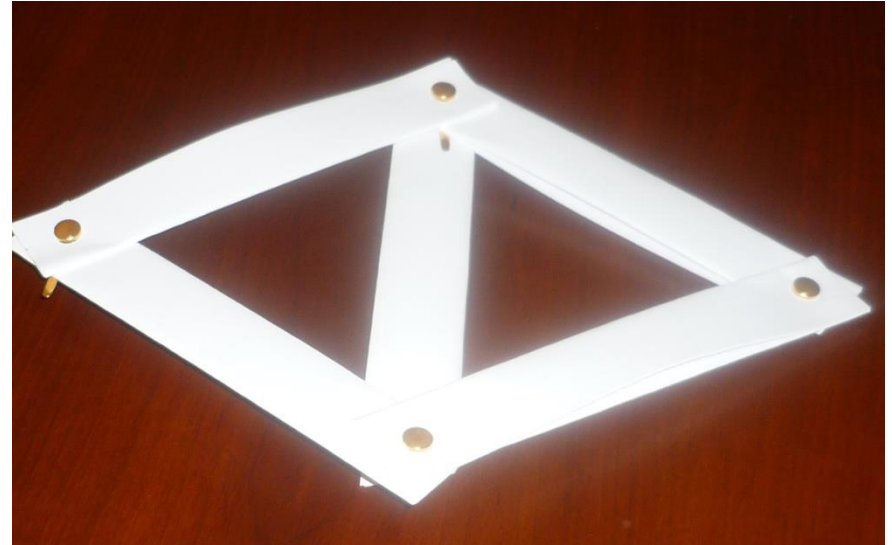
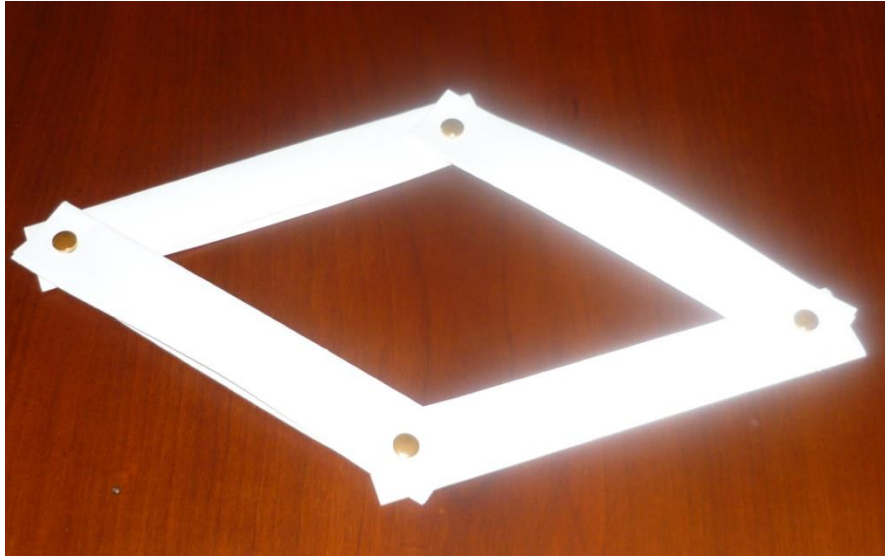


Polygons—Stability and Strength

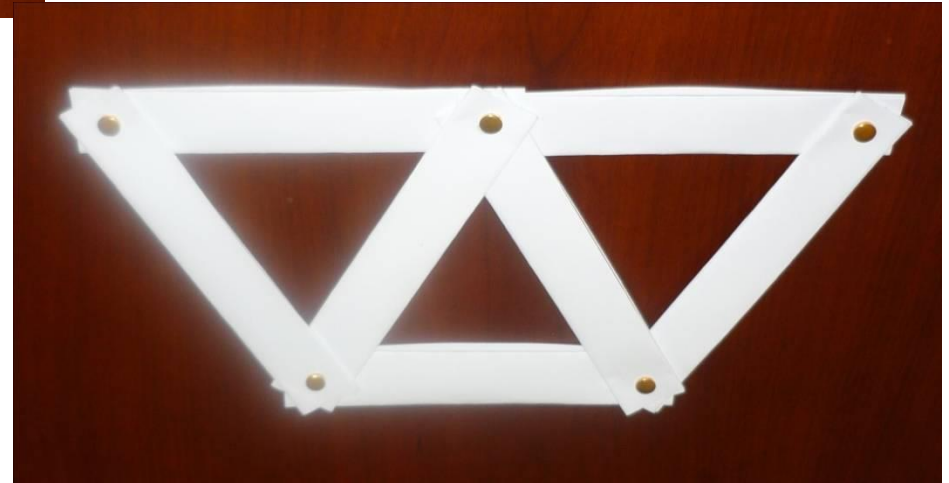
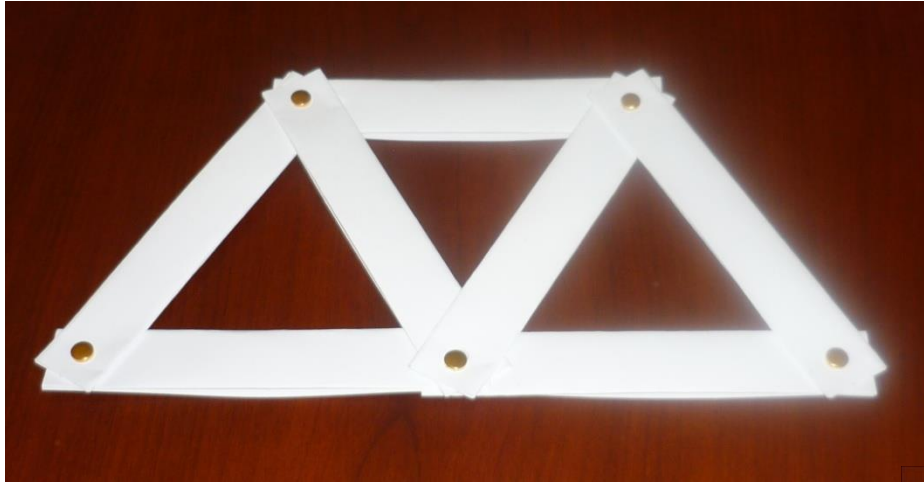


Square made with 4 x 6 index cards folded lengthwise twice.

Stability of Square with Diagonal Added



Triangular Trusses From 4x6 Index Cards



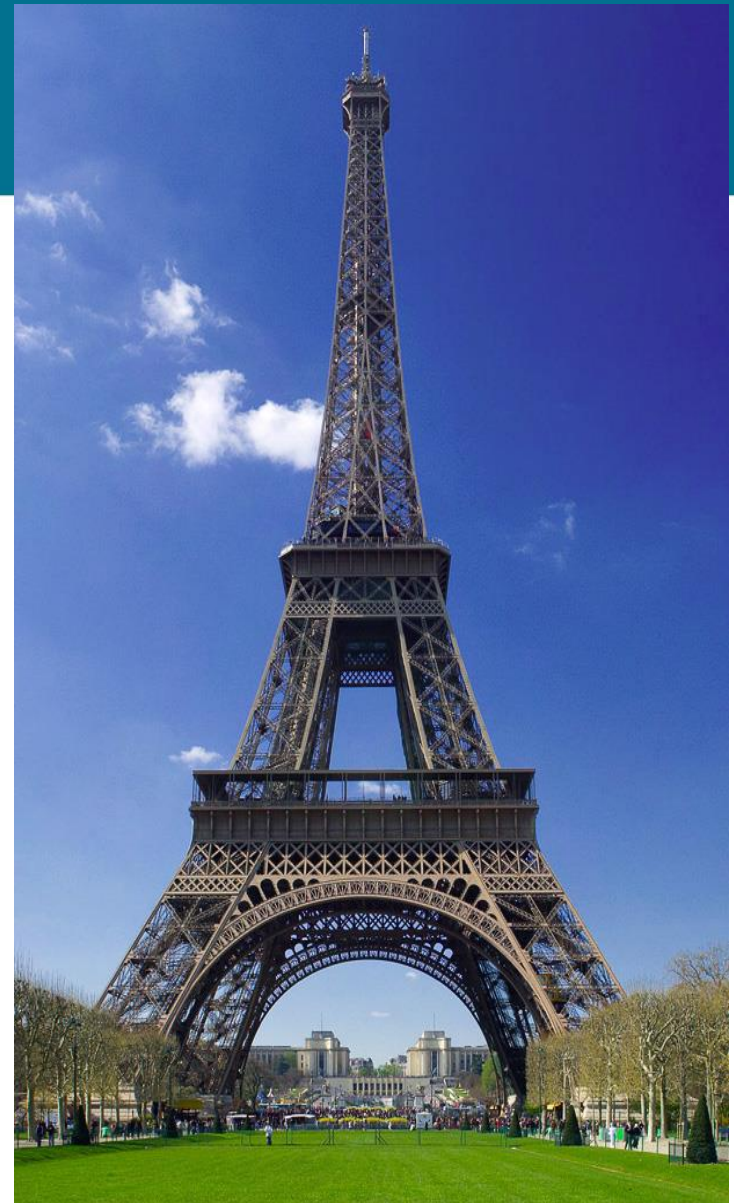
Card Bridges

Demonstrate triangle trusses
using cards





Eiffel Bridge and Tower France



Folded Plate Bridge



Cardstock folded lengthwise

Suspension Bridge



Golden Gate Bridge—San Francisco--

Contact Information

mel.griffin@waldenu.edu

monique.lynch2@waldenu.edu