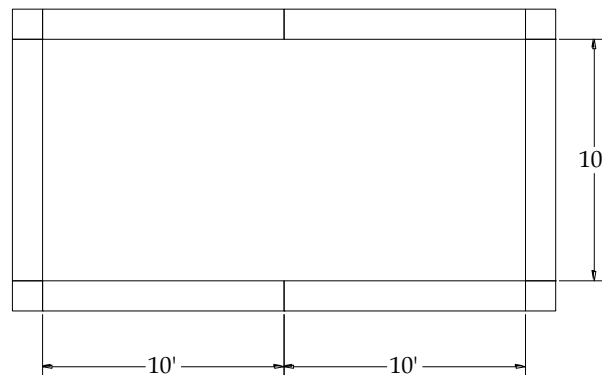


Name: \_\_\_\_\_

NB: Use the truss catalog posted on OpenLab (on the assignments page) for reference.

1) Given a 40' span and a 1500# load at the center point, choose an appropriate size and connection style of Tomcat truss. (2 points)

2) The drawing below represents a top view of several sections of truss connected in a rectangular configuration by 2-way corner blocks. What is the *total self weight* of this truss? All elements are Tomcat 20.5"x20.5" plated medium-duty box truss. (4 points)



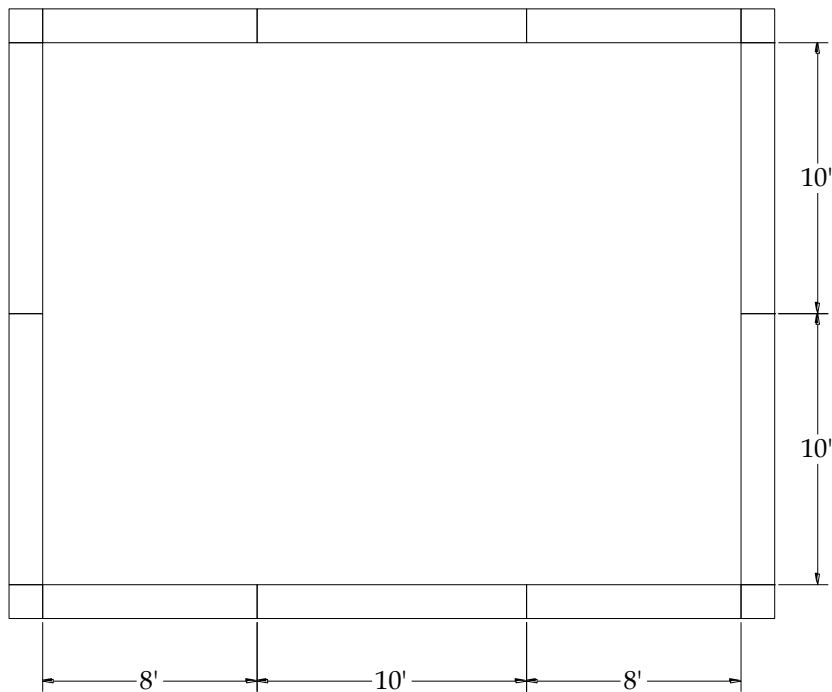
3) Assuming the same truss structure is picked up at the corner blocks, what is the *maximum distributed (uniform) load* the same truss can support along one of the 20' long sides? (4 points)

*Show all of your work!*

4) The drawing below represents a top view of several sections of Tomcat 12"x12" plated truss and 2-way corner blocks connected with 5/8" Grade 8 bolts. (10 points)

A) List all sections needed, with part numbers, and count bolts, nuts, and washers needed (4 bolts, 4 nuts, and 8 washers per joint). Add an amount of spare hardware that seems prudent to you—round numbers are good.

B) If the truss is hung from a hoist at each corner, with the long sides evenly loaded at 10 pounds per foot and the short sides supporting 500# at the center of their span, what is the load on each hoist? Assume the load will be evenly distributed between the four hoists. NB: This type of rig requires careful load monitoring to ensure that the load remains equal.



*Show all of your work!*