**Truss Destruction Worksheet**

Your team’s truss configuration: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (letter and formal name)

1. **Describe** your methods of construction (for example, butt joints, overlapping, notched, combinations) and why you chose those methods.
2. **Rank** your classmates’ truss designs and construction (1 = weak, 5 = strong)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Truss Configuration** | **Shear Performance Prediction** | | | | | **Compression Performance Prediction** | | | | |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |
|  |  | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** | **5** |

1. **Shear Testing Results**

|  |  |  |  |
| --- | --- | --- | --- |
| **Team Member:** | **1** | **2** | **3** |
|  |  |  |
| **Joint Style:** |  |  |  |
| **Weight of Truss 1:** |  |  |  |
| **Failure weight of Truss 1:**  **(shear)** |  |  |  |
| **Shear Strength Ratio: (failure weight / truss weight)** |  |  |  |
| **Describe how it failed:** |  |  |  |

1. **Compression Testing Results**

|  |  |  |  |
| --- | --- | --- | --- |
| **Team Member:** | **1** | **2** | **3** |
|  |  |  |
| **Joint Style:** |  |  |  |
| **Weight of Truss 1:** |  |  |  |
| **Failure weight of Truss 1: (compression)** |  |  |  |
| **Compression Strength Ratio: (failure weight / truss weight)** |  |  |  |
| **Describe how it failed:** |  |  |  |

1. **Calculate the normalized strengths for your teams’ truss designs:**

**1-Normalized shear strength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Normalized compressive strength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2-Normalized shear strength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Normalized compressive strength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3-Normalized shear strength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Normalized compressive strength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**