**Pre-Activity Quiz**

1. Explain if and why the shapes below would either remain unchanged or collapse if you pressed down at the pin joints in the arrow directions. If the shape collapses, how might you strengthen it?

Square:

Triangle :

1. Calculate the strength-to-weight ratio of the three objects in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Object** | **Mass (g)** | **Breaking Load (g)** | **Strength- to- Weight Ratio** |
| 1 | 6 | 102 |  |
| 2 | 4 | 76 |  |
| 3 | 6 | 114 |  |