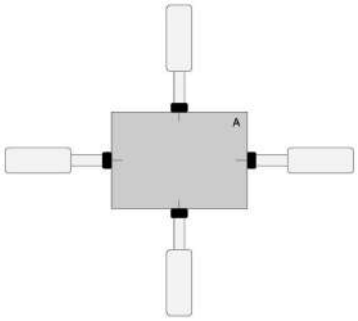
Name: _____ Date: _____

# Investigations A&B

**Part 1: Data Collection / Observations**

1. For each investigation, place the 4 spring scales provided to your group so they are pushing on the foam at the locations indicated by the arrows.
2. For each condition, increase or decrease the magnitude of the forces pushing on the foam, and record the force measurements when the system is stable (when the foam is not moving and nobody is touching it).

| Investigation | Results for each condition you tested |
|---|---|
| A   | |
| B   | |

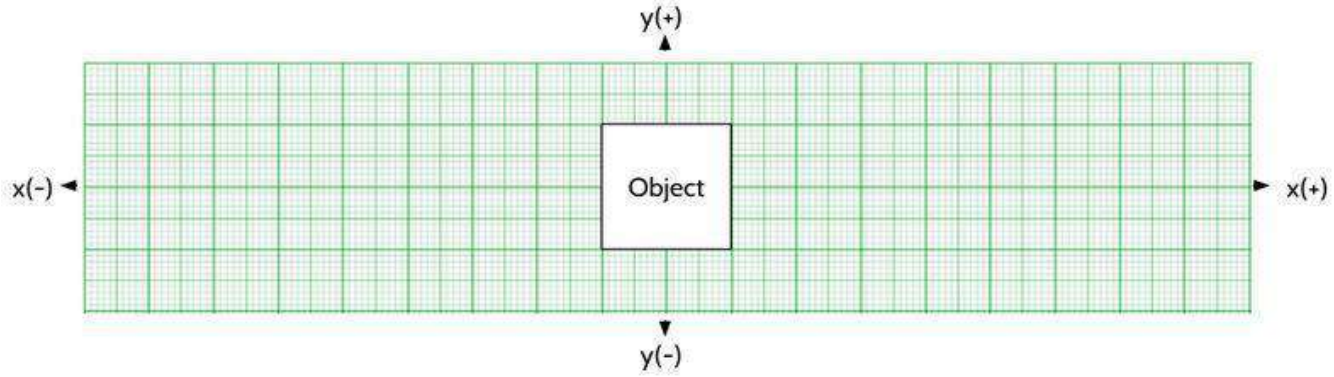
**Part 2: Data Analysis** (Complete only *after* you have finished Part 1.)

1. How do the forces pushing on an object compare when it remains “stable”?

2. How did you decide that you had tested enough conditions for either investigation (A or B)?

**Part 3: Use a Model**

Create a free-body diagram to represent a stationary object with 3 contact forces acting on it in the horizontal direction (along the *x-axis*).

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Then review the *GPS Plate Map*. Evaluate whether your free-body diagram is a reasonable model for explaining why the Caribbean plate (marked with a ★) might appear to be stable (not moving) relative to other plates. Why or why not?