**Friction Lab Name:**

 /10

**Procedure:**

1. In groups of 3, obtain 1 wooden slab, 4 textbooks, and a spring scale.
2. For each of the following situations, determine the force needed to move the textbooks at a constant velocity for **two different surfaces (desk and carpet)**. Fill in the table below and show all your work. (2 marks)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Number of Text Books | Trial 1 (on desk)Friction Force (N) | Trial 2 (on carpet)Friction Force (N) |
| 1. Block with 1 textbook

 |  |  |  |
| 1. Block with 2 textbooks

 |  |  |  |
| 1. Block with 3 textbooks

 |  |  |  |
| 1. Block with 4 textbooks

 |  |  |  |

1. Plot a graph of Friction force vs. Number of Textbooks. Use triangles for Trial 1 and Squares for trial 2.
* Title your graph
* Label your axes
* Draw a line of best fit through your points

(3 marks)



1. What does the slope represent? (1 mark)
2. What does a steeper slope in the graph tell you about the surface roughness? (1 mark)

1. In your own words, describe what friction is. (1 mark)
2. What are some real life scenarios when you would want a high coefficient of friction? (1 mark)
3. What are some real life scenarios when you would want a low coefficient of friction? (1 mark)