What is the tradeoff? lab Name:

 Date: Per:

How does the input distance affect the input force?

IV: (2 points)

DV: (2 points)

control: (2 points)

3 constants (1 point each)

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Hypothesis: (3 points)

Materials:

* 1 meter stick
* 1 weight
* 3 different spring scales
* 1 ramp marked at regular intervals
* 1 lab stool

Procedure:

1. Place lab stool upside down on lab table.
2. Measure the vertical distance from the bench to the top of the first rung on the stool.
3. Use spring scale to measure the weight of object to be moved.
4. Place ramp at first interval.
5. Use spring scale to pull weight from the bottom to the top of the ramp.
6. Place ramp at second interval.
7. Repeat step #5.
8. Place ramp at third interval.
9. Repeat step #5.
10. Place ramp at fourth interval.
11. Repeat step #5.
12. Repeat steps #2-11.

Observations: (4 points)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Distance (m) | Trial 1Force (N) | Trial 2Force (N) | AverageForce (N) |
| Control |  |  |  |  |
| 1st interval |  |  |  |  |
| 2nd interval |  |  |  |  |
| 3rd interval |  |  |  |  |
| 4th interval |  |  |  |  |

What type of graph will you make? (1 point)

Why? (2 points)

Using the average force, complete a graph of the data below. (10 points):

Please attach conclusion on another sheet of paper. (15 points)

