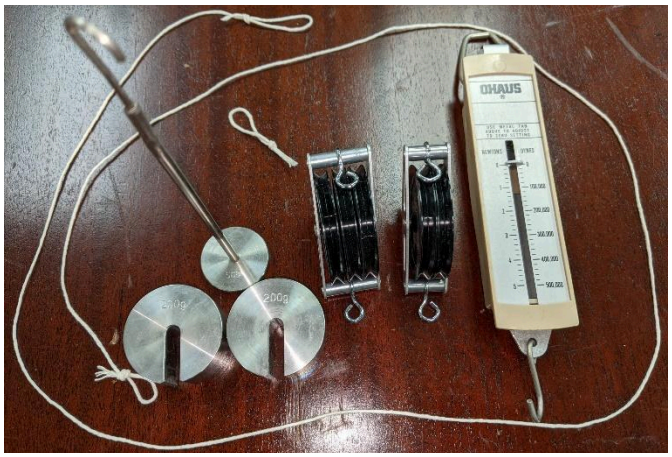
Enter group members' names: [ ]
Enter the name of the member who will submit the group report in the Google Classroom: [ ]

AP Physics C: Pulley Lab:



Material: Strings, 1-tripple pulley, 1 double-pulley, 1 spring scale (adjust the scale so it reads zero when there is no force), two 200g weights, one 50g weight holder with hook, and an assigned number of either 2, 3, 4, or 5.

Task: Use provided material to make a pulley system that can be used to lift 450g of weight by exerting a downward force. Your group's pulley system should also provide a mechanical advantage that equals to your group's assigned number.

Lab outcomes:

Enter your group's assigned number here: x = [ ].

You may insert pictures of your drawing for diagrams:

I. Draw a diagram of your pulley system with a mechanical advantage (MA) = x here:

II. Draw a diagram of your pulley system with an MA = 1/x here:

Exert your downward force using the spring scale and record the scale reading below. Do 3 trials each.

Part I: Scale reading = [ ], [ ], [ ]

Part II: If the downward force exceeds the range of the spring scale, you may use less load (only the hook can work too).

Part II load mass = [ ], Scale reading = [ ], [ ], [ ]

For EACH PART: Calculate the average MA of your pulley system and compare it to x (for part I) and 1/x (for part II). Also calculate the % difference between your calculated MA and the target MA.

Part I:

Part II:

Discuss possible factors that may have contributed to the above % difference: