

Connected bodies (rough table)

Questions

1. If both the masses are same then what should be the coefficient of friction to keep the bodies in equilibrium?
2. Is it possible for a lighter mass on table to remain in equilibrium when a heavier mass is suspended from the string?
3. For a set of masses what happens to tension in the string if coefficient of friction is increased?
4. For a fixed mass on the table and coefficient of friction, what happens to the tension in the string and frictional force if the suspended mass is increased?
5. For a fixed mass of the body suspended and coefficient of friction, what happens to the tension in the string and frictional force if the mass of body on the table is increased?

Note :

While simulations help to provide valuable insights and visualizations, a rigorous mathematical solution should always be considered as a benchmark, demonstrating not just familiarity with the concept, but a deep understanding of the underlying principles.

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