



## Physics: Coefficient of Friction

Paper citation: Hu A, Peachey B (2016). Redesigning an Experiment to Determine the Coefficient of Friction. J Emerging Investigators 76: 1-5

### Paper questions

*In reading through the assigned papers, please answer the following questions:*

1. What did you learn from reading the introduction?
2. Starting with Newton's second law, derive the equation for the coefficient of kinetic friction as it is applicable to the "old method".
3. What was the hypothesis being investigated by the researchers?
4. Do the results match the hypothesis which was first presented by the authors?
5. Propose two follow-up experiments that could be performed given the data presented in this paper.
6. In this experimental set-up, what would happen if you changed the angle  $\theta$ ? Would you expect get a different coefficient of friction? Why or why not?
7. What are some shortcomings of this paper?
8. Could this method be used to experimentally determine a coefficient of static friction? Why or why not?