Today:

Resistive Forces

Irish Phrasebook

Whist – be quiet

"Would ya whist!"

Announcements

Paper HW: Chapter 5 (Due October 23rd)

In your LON-CAPA homework for chapter 5 you had a question titled "Refrigerator Magnet" that asked you to find the minimum force the magnet must exert on the fridge to hold up the note. In this On-Paper assignment you will flesh out the details of this problem.

a) Draw a system schema that represents all the objects in this interaction.

b) Draw separate free-body diagrams for each of the three objects in the system (refrigerator, magnet, note). Make sure you label all of the forces in the free-body diagram.

c) Write out an expression for the total force acting on each of these objects IN SYMBOLIC FORM.

d) Show your algebraic work for answering your LON-CAPA version of the minimum force required to hold up the note

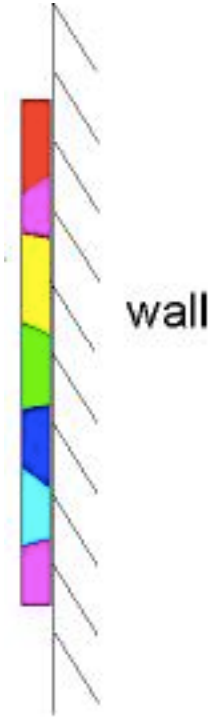
You decide to hang a painting on the wall. To decide if you like it there you want to hold it against the wall. The painting has a mass of 0.53 , and the coefficient of static friction, $\mu_s = 0.64$. How much force to you need to apply horizontally to the painting to prevent it from falling?

A. 3.33 N

B. 5.2 N

C. 8.12 N

D. Something else



The Relationship Between the Contact, Normal, & Friction Forces

Will friction always be related to the gravity and normal force in a situation? And can normal forces be frictional forces?

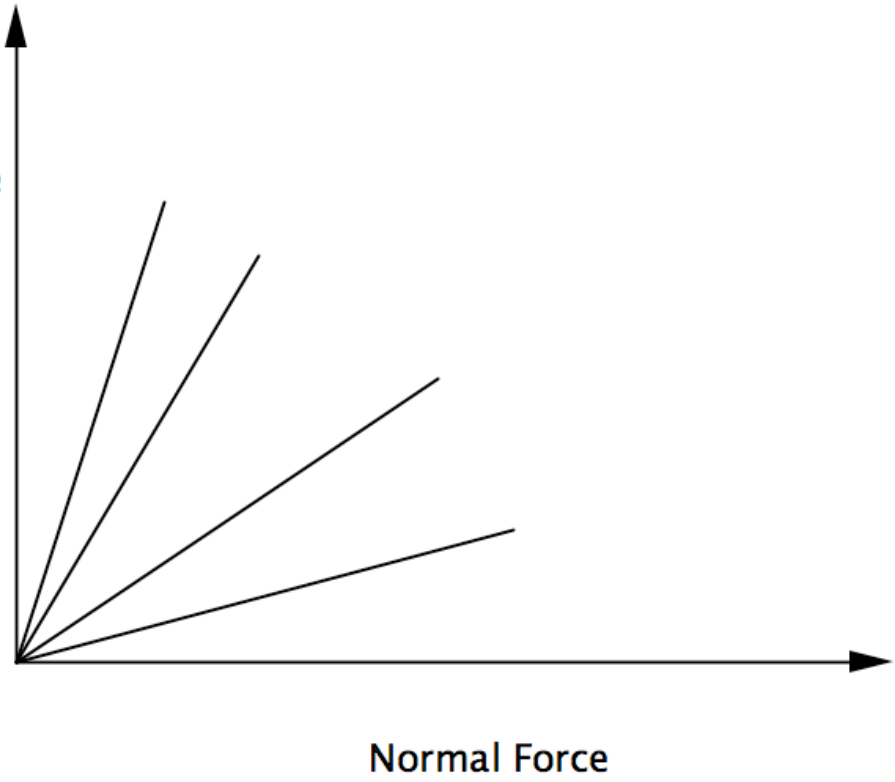
In many of the examples from the book, the force normal is converted into mgcos or mgsin. How did they decide when to set force normal to mgcos or mgsin?

When we are making free body diagrams and calculating out net force, how do we know whether to put Fn-mgSIn0 or mgSin0-Fn.? I am confused as to which way is correct. This goes along with the horizontal force with Ff-mgCos0 or mgcos0-Ff.

Can we please practice examples like the book sliding up the wall where a lot of forces are involved and we have to look at things piece by piece?

Consider the various lines in the graph below. What would best describe the difference between these lines?

A. They are different materials.
B. They have different coefficients of friction.
C. They are the same situation with different angle.
D. All of the above are possible.
E. None of the above explain the differences.

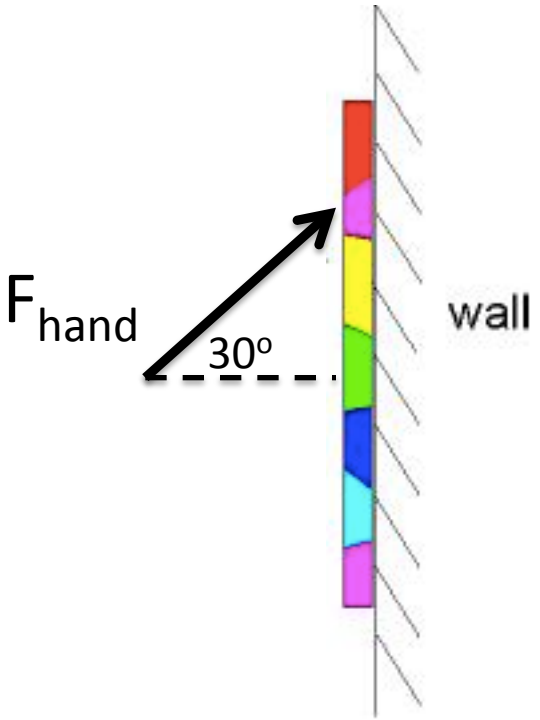


You decide to hang a painting on the wall. To decide if you like it there you want to hold it against the wall. The painting has a mass of 0.53 , and the coefficient of static friction, $\mu_s = 0.64$. You push up at an angle of 30^{o}. How will the force you need to apply to the painting to prevent it from falling compare to before?

A. It will be smaller

B. It will be bigger

C. It will be the same



You decide to hang a painting on the wall. To decide if you like it there you want to hold it against the wall. The painting has a mass of 0.53 , and the coefficient of static friction, $\mu_s = 0.64$. You push up at an angle of 30^{o}. How much force to you need to apply to the painting to prevent it from falling?