

Physics 121 – September 25, 2009

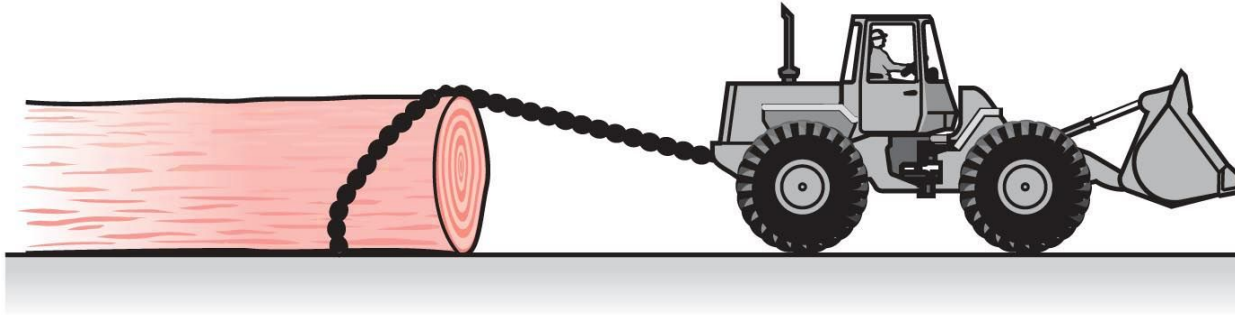
Assignments:

Today:

- Homework problems due today
Chap 5, # 14, 19, 24, 26, 27, 29, 30, 47
- Frictional forces, examples
- Mastering Physics Assignment 5 due by
Sunday, Sept 27 @ 11pm.

Next week:

- Read Chap 6 (Work, Energy, and Power)
- Review for first exam (exam date is Monday Oct 5,
will cover material in Chap's 1-5)



Copyright © 2007 Pearson Education, Inc., publishing as Pearson Addison-Wesley.

iClicker: The figure above shows a loader dragging a log by a chain that is attached to the log. Compare:

frictional force of the ground on the log
to

weight of the log multiplied by the coefficient of kinetic friction.

A The frictional force is equal to weight times coefficient

B The frictional force is less than weight times coefficient

C The frictional force is greater than weight times coefficient

Comparing Friction Forces with Gravity Conceptual Question

Difficulty: 1 Time: 2m

Manage this Item: Standard View

Return to Assignment 5: Applying Newton's Laws

Previous | 5 of 5 | Next

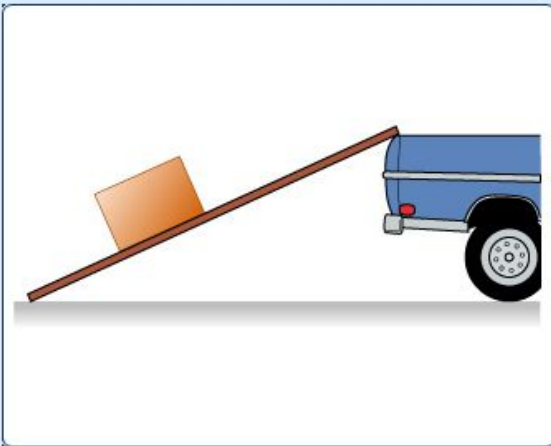
Comparing Friction Forces with Gravity Conceptual Question

Ken Minschwaner

- Assignments
- Courses
- Gradebook
- Item Library



A large crate filled with physics laboratory equipment must be moved up an incline onto a truck.



Part A

The crate is at rest on the incline. What can you say about the force of friction acting on the crate?

Please Choose

submit | hints | my answers | show answer | review part

Part B

A physicist attempts to push the crate up the incline. The physicist senses that if he applies slightly more force the crate will move up the incline but cannot muster enough strength to get the motion started. What can you say now about the force of friction acting on the crate?

Please Choose

submit | my answers | show answer | review part

Part C

The first physicist gets a second physicist to help. They both push on the crate, parallel to the surface of the incline, and it moves at constant speed up the incline. How does the force exerted by the two physicists on the crate compare with the force of friction on the crate?

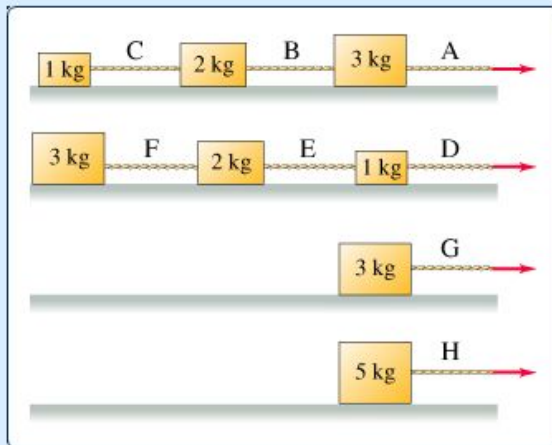
$F_{\text{two physicists}}$ Please Choose F_{friction}

submit | hints | my answers | show answer | review part

submit item

Kinetic Friction Ranking Task

Below are eight crates of different mass. The crates are attached to massless ropes, as indicated in the picture, where the ropes are marked by letters. Each crate is being pulled to the right at the same constant speed. The coefficient of kinetic friction between each crate and the surface on which it slides is the same for all eight crates.



Part A

Rank the ropes on the basis of the force each exerts on the crate immediately to its left.

Rank from largest to smallest. To rank items as equivalent, overlap them.

A B C D E F G H

largest smallest

The correct ranking cannot be determined.

[reset](#) [help](#)

[submit](#) [hints](#) [my answers](#) [show answer](#) [review part](#)