

Challenge Problem 10

Mass M_a slides on top of mass M_b as shown. Assume $M_b > M_a$. The two blocks are pulled from rest by a massless rope passing over a massless pulley. The pulley is accelerated at rate A . Block M_b slides on a table without friction, but there is a constant friction force f between M_a and M_b due to their relative motion.

Find the tension in the rope.

