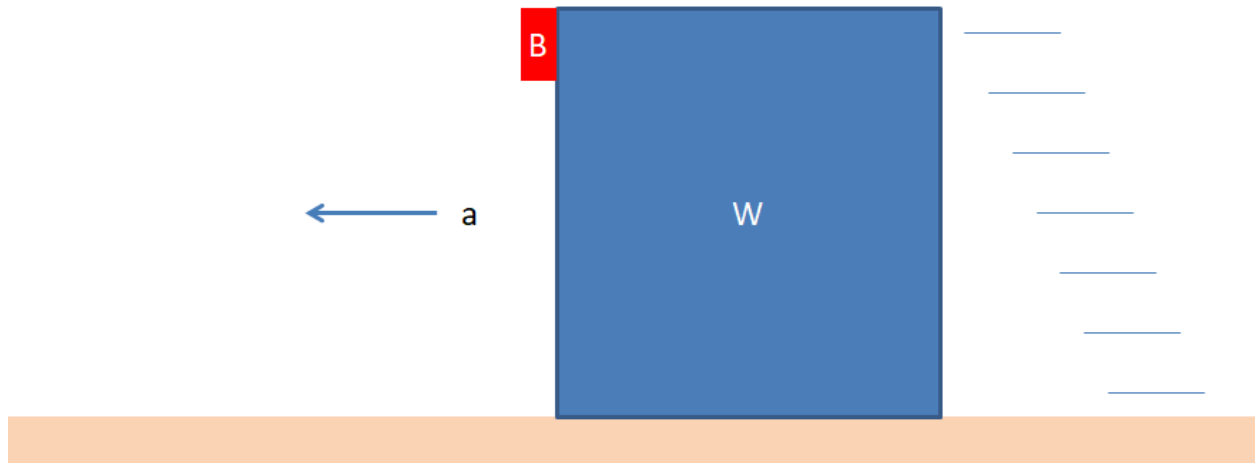


Block and Wall:



The coefficient of kinetic and static friction is 0.215 between a block “B” and a wall “W”. The wall has a mass of 5.00 kg, and the surprisingly dense block B has a mass of 4.50 kg. Initially, the bottom edge of the block is exactly 3.00 m from the bottom of the wall. The wall is sliding and accelerating to the left such that the block B maintains contact with it because of inertia. The coefficient of friction between the odd sliding wall and the floor is 0.120.

- A. If the wall is accelerating at 24.0 m/s/s to the left, and the block starts sliding down the wall from rest,
 - a. What is the acceleration of block B down the wall?
 - b. What is the force the block and wall system is exerting on the floor?
 - c. What force to the left would effect this acceleration?
- B. Suppose the same setup, but this time there is a force of 285 N applied to the left on the wall as the wall is sliding to the left.
 - a. What is the acceleration of the wall? (give me like 3 decimal places)
 - b. What will be the acceleration of block B down the wall?
- C. What force would you have to apply to the left on the wall as it slides left so that the block would take exactly 1.00 seconds to go down the wall?