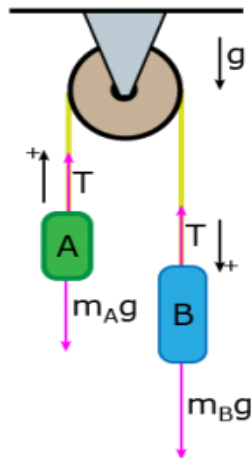


Exercise: Chapter 4

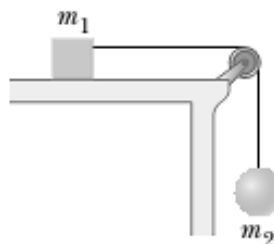
Answer ALL questions. (15 Marks)

1. An Atwood machine with a pulley mass consist of m_A and m_B equal to 3 and 5 kg respectively. Find the acceleration and tension in the string connecting the two masses in the system.



(7 Marks)

2. A box, m_1 and a ball, m_2 with a masses of 4.00 and 7.00 kg, respectively are connected by a wired through a frictionless pulley. Given that the kinetic friction's coefficient between the box and table surface is 0.30. Determine the acceleration of both objects **and** tension of the wired.



(8 Marks)

Answer:

1. $T = 36.75 \text{ N}$

2. $a = 5.17 \text{ m/s}^2, T = 32.48 \text{ N}$