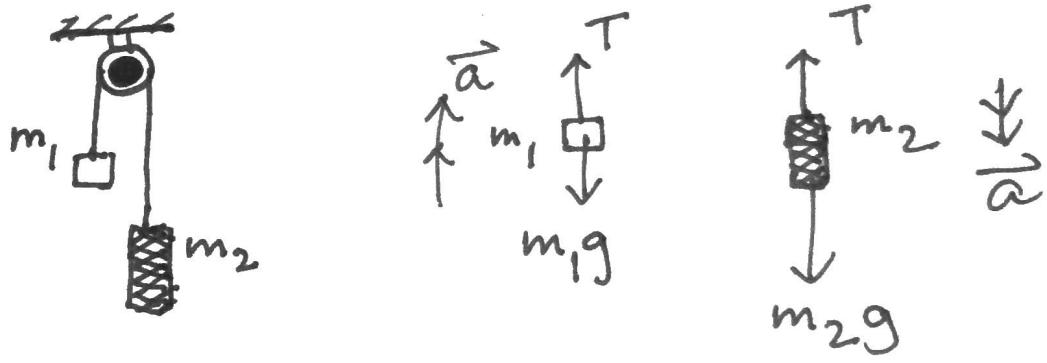
Example

Atwood's machine. Two blocks are connected by a cord (of negligible mass) that passes over a frictionless pulley (also of negligible mass). The arrangement is known as Atwood's machine. One block has mass $m_1 = 1.3$ kg; the other has mass $m_2 = 2.8$ kg. Find (a) the magnitude of the blocks's acceleration and (b) the tension in the cord.



N-2 Law:

m_1 : $T - m_1 g = m_1 a$

m_2 : $m_2 g - T = m_2 a$.

* Find a, T by solving these 2 above equations simultaneously.