



Two cubes with masses $m_A = 3kg$ and $m_B = 2kg$ are on an inclined smooth table. There is a rope of neglectable mass linking the cubes (see figure). Cube A is subjected to a variable force \vec{F} of module $F = 2tN/s$, always parallel to the table and directed like in figure. The maximum tension the rope can stand is $40N$. Calculate the time at which the rope breaks.