

In the Figure below, **box 1** ($m_1 = 2 \text{ kg}$) rests on a table with friction ($\mu_k = 0.15$ and $\mu_s = 0.3$) is connected by an ideal rope passed through a frictionless pulley to **box 2** ($m_2 = 30 \text{ kg}$). It is released from rest, and immediately a force of 10 N acts on the **box 1** in the direction shown. After **box 2** has fallen 0.8 m find the **speed** of **box 1**.

