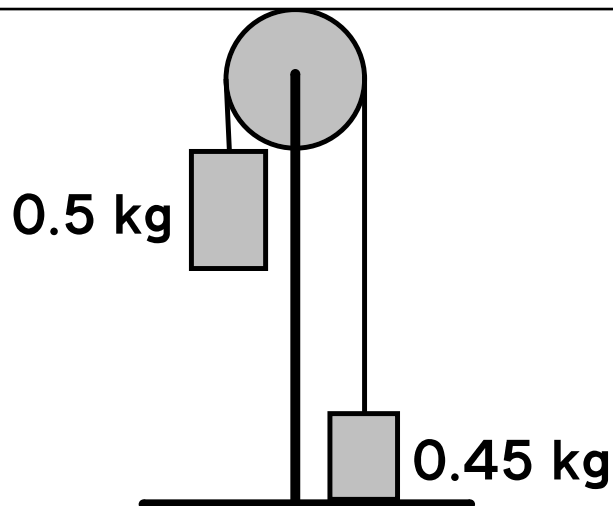


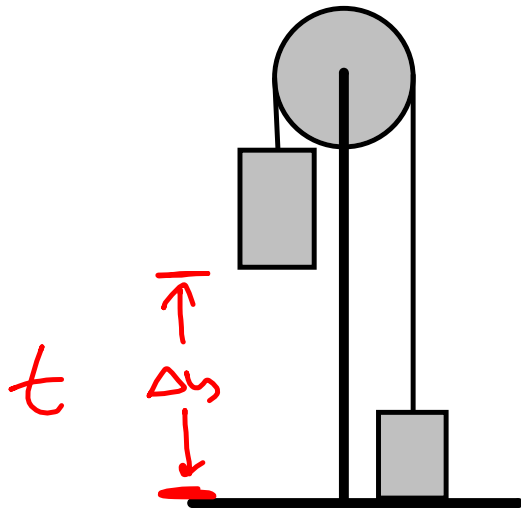
Materials:

- string
- **Atwood's Pulley**
- **0.5 kg mass**
- **0.45 kg mass**
- **timer**
- **meterstick**

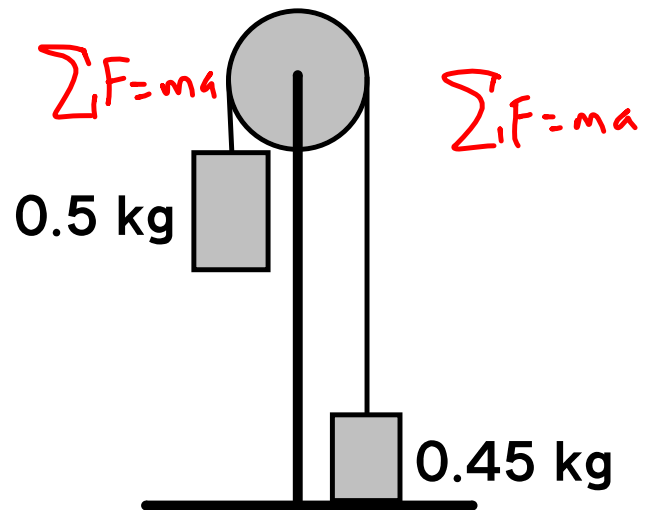
**Purpose:**

To compare the actual acceleration of the system (calculated from distance and time information), to the theoretical acceleration (calculated from force and mass information).

ACTUAL ACCELERATION



THEORETICAL ACCELERATION

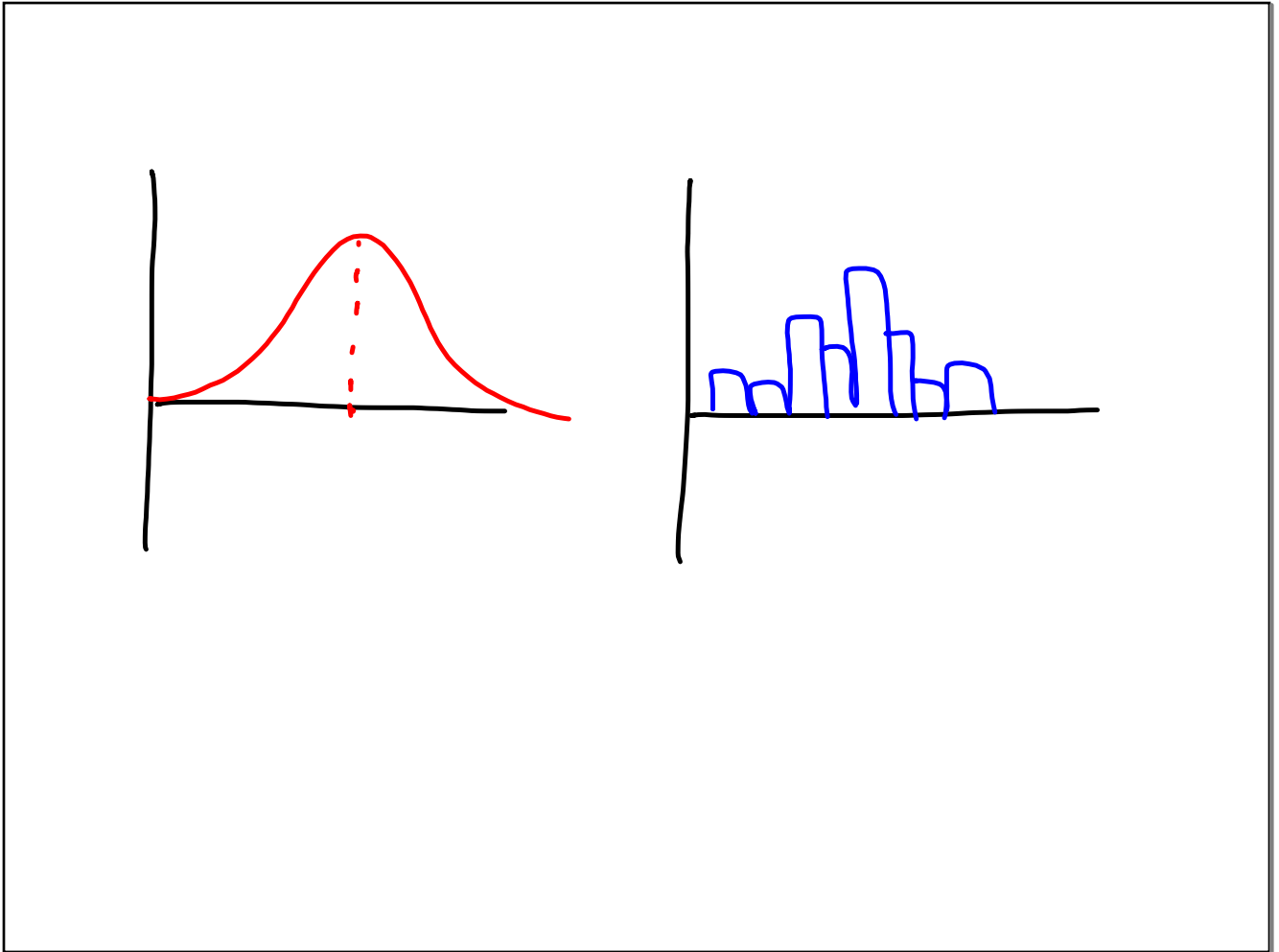


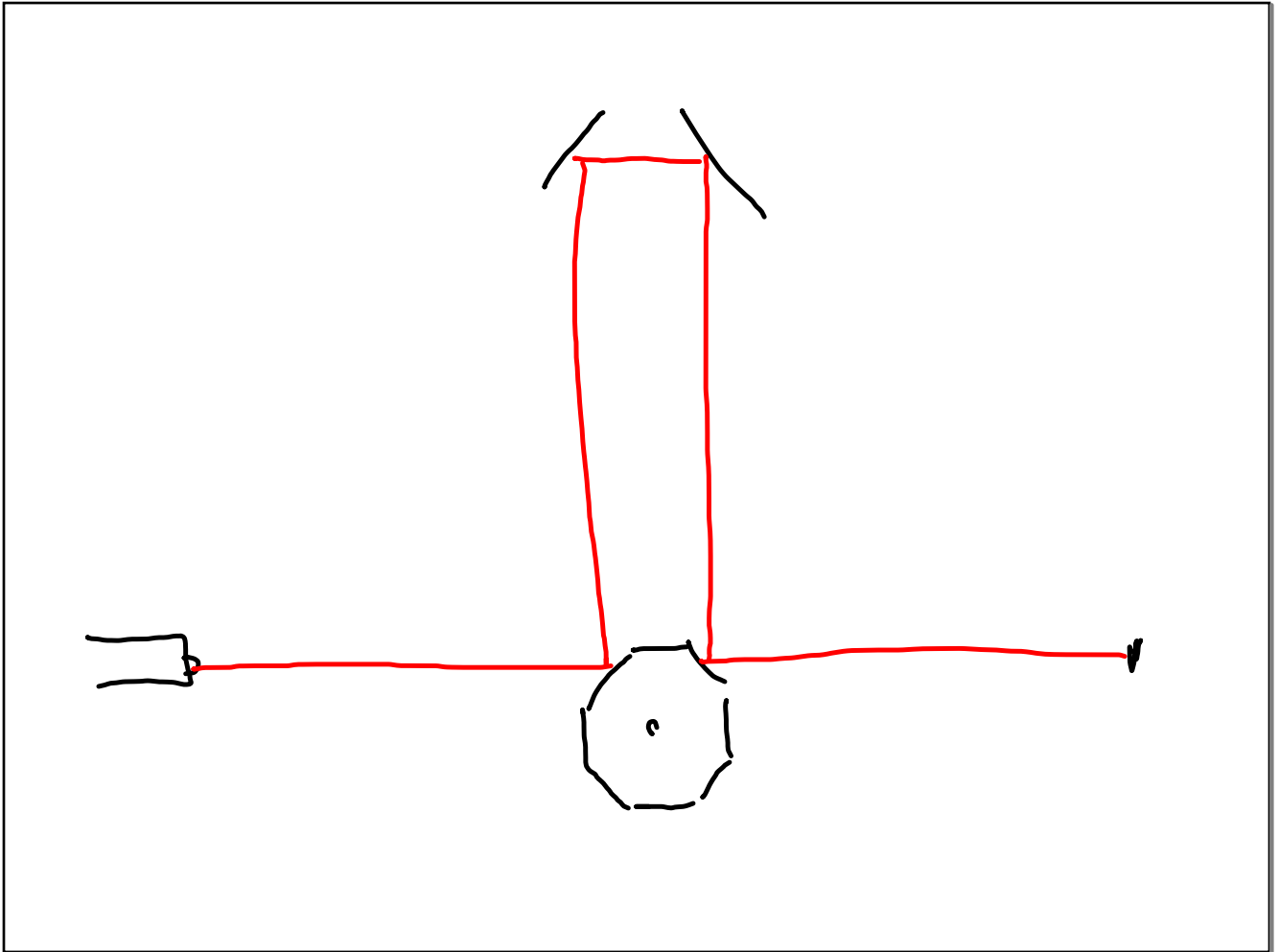
In your analysis, be sure to include:

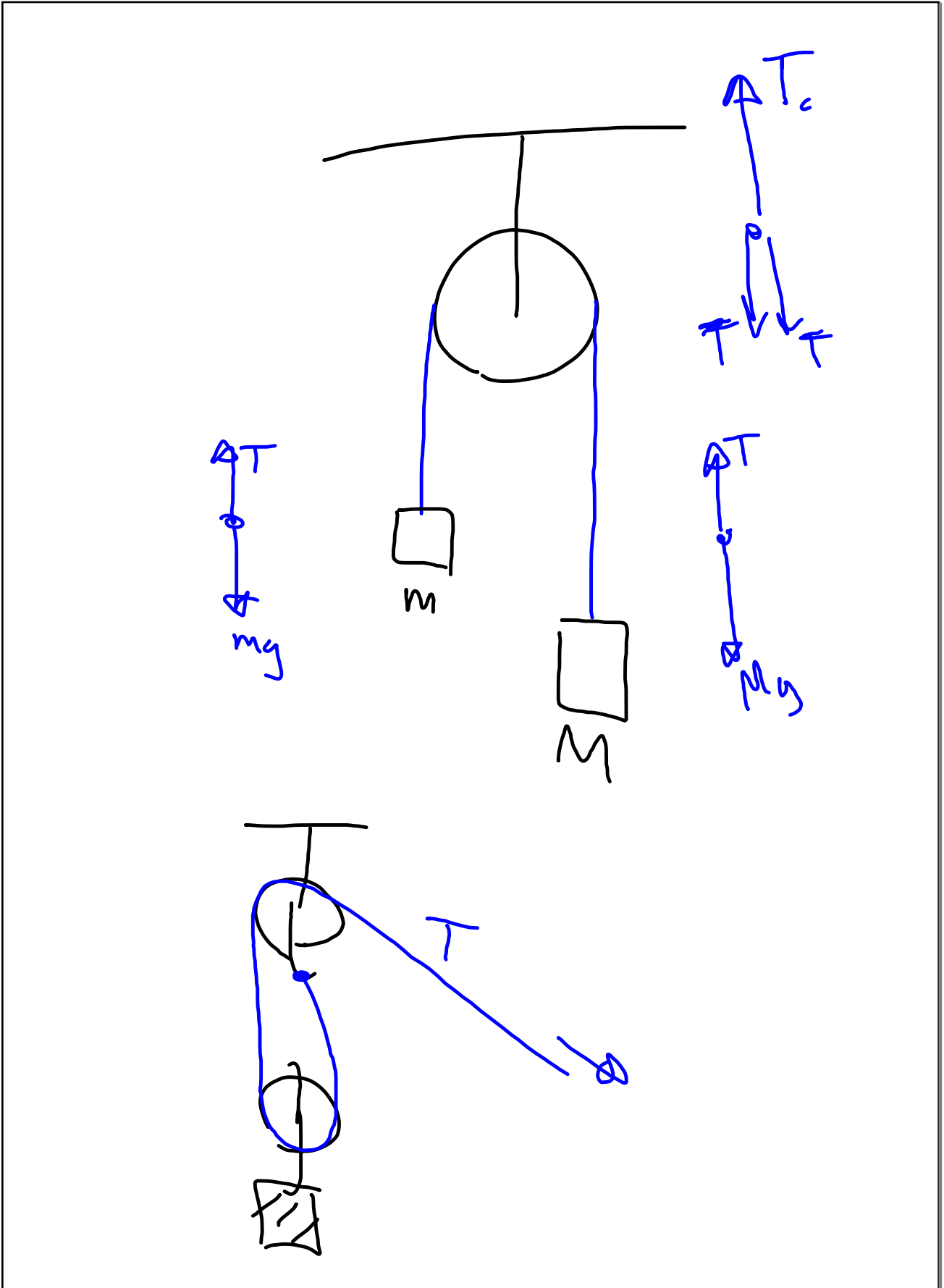
- **actual calculation with equation of kinematics**
- **theoretical calculation with FBDs and**

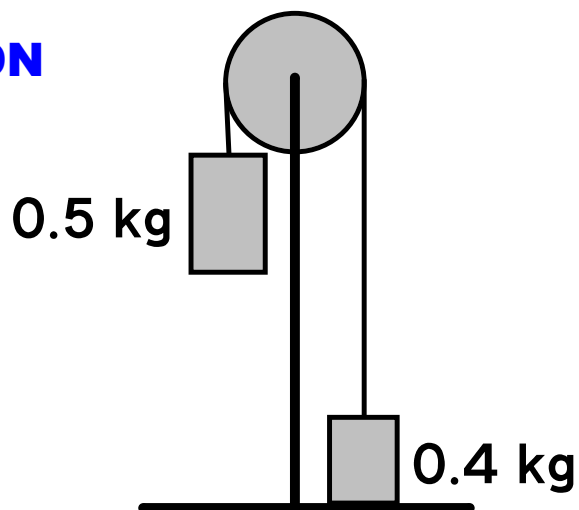
In your conclusion, be sure to include:

- **statement that addresses the purpose.**
- **estimates of length and time error.**
- **explanation of why actual accel comes out less than theoretical.**







ACTUAL ACCELERATION

$$\Delta X = v_0 t + \frac{1}{2} a t^2$$

$$y = y_0 + v_{y0} t + \frac{1}{2} a t^2$$