

4. Dua 2:

$$a_2 = \frac{\cancel{mg \sin \alpha} - \cancel{km g \cos \alpha} - F_T}{m} \quad \frac{F_T - mg \sin \alpha - km g \cos \alpha}{m}$$

Dua 1:

$$a_1 = \frac{mg - F_T}{m}$$

$$a_1 = a_2 : F_T = \frac{mg \sin \alpha + km g \cos \alpha + mg}{2}$$

$$= \frac{1}{2} \left(\frac{1}{2} \times 10 + 0.1 \times 10 \times \frac{\sqrt{3}}{2} + 10 \right)$$
$$= \frac{1}{2} \left(15 + \frac{\sqrt{3}}{2} \right) = \frac{15}{2} + \frac{\sqrt{3}}{4}$$

$$a = g - \frac{F_T}{m} = 10 - \left(\frac{15}{2} + \frac{\sqrt{3}}{4} \right)$$
$$= \frac{5}{2} - \frac{10 - \sqrt{3}}{4}$$