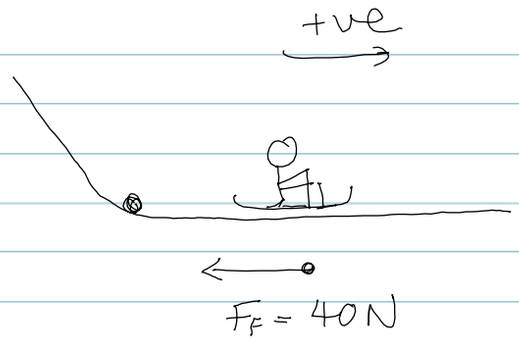
8.35

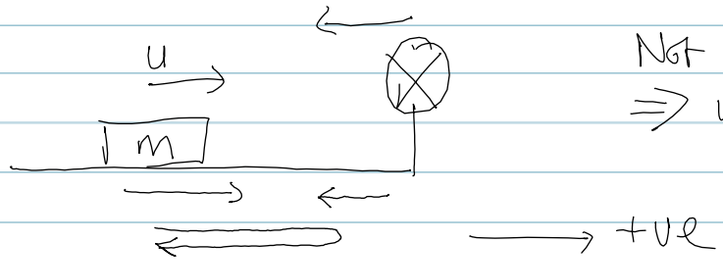


— Need to convert to ms^{-1}
— Frictional force F_F/m ←
— $v^2 = u^2 + 2as$

$$0 = \left(\frac{29}{3.6}\right)^2 + 2\left(\frac{-F_F}{m}\right)s$$

$$\boxed{s = 49\,m}$$

8.36



Not a const force
⇒ integrate to get v.

$$F = ma$$

$$-0.2t^2 = ma \Rightarrow a(t) = \frac{-0.2t^2}{m}$$

$$v(t) = \int_{t=0}^{t} \frac{-0.2t^2}{m}\,dt$$

$$v = -\frac{1}{3}\cdot\frac{0.2t^3}{m} + v_{t=0}$$

a) $v(t = 3.5s) = \boxed{0.12\,ms^{-1}}$