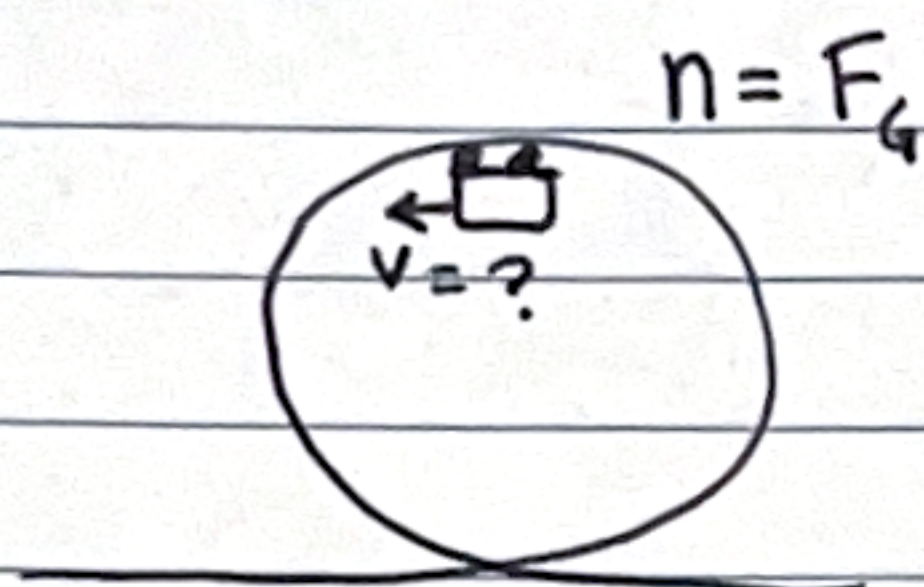


p.199 #21



$$D = 40\text{ m}$$

$$\therefore R = 20\text{ m}$$

$$\vec{n} \Downarrow \vec{F}_g$$

$$\Sigma F_r = m a_r$$

$$n + mg = m \left(\frac{v^2}{r} \right)$$

$$mg + mg = m \frac{v^2}{r}$$

$$2mg = m \frac{v^2}{r}$$

$$v = \sqrt{2rg}$$

$$v = \sqrt{2(20\text{ m})(9.8\text{ N/kg})}$$

$$v = \boxed{20\text{ m/s}}$$