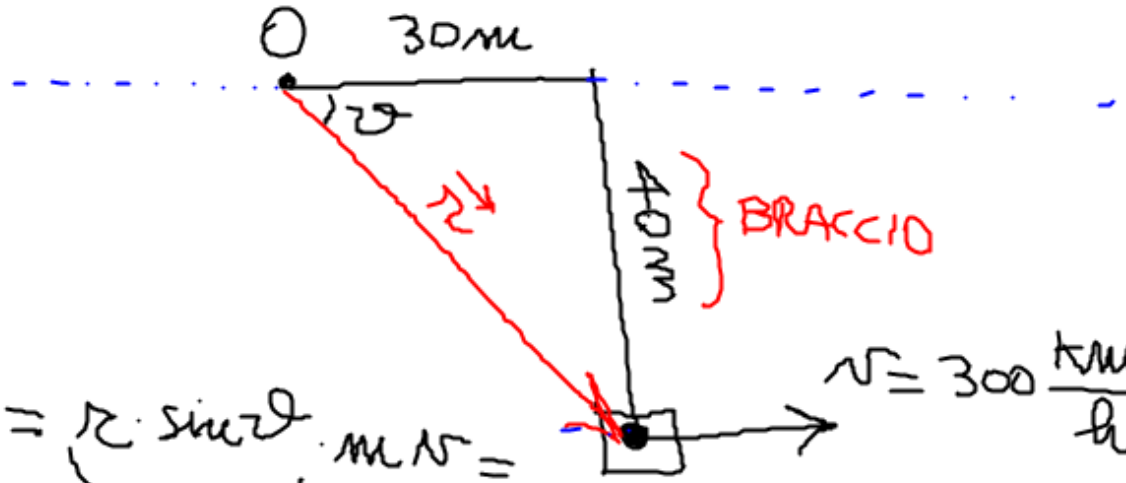
PAG. 522 N 82

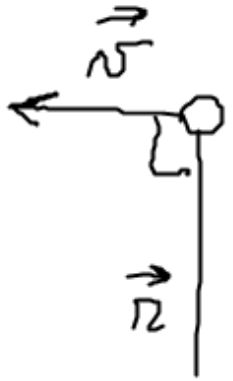
DALL'ALTO



$L = \underbrace{r \cdot \sin\vartheta}_{40\,m} \cdot m v = \quad v = 300 \frac{km}{h} = \frac{300}{3,6} \frac{m}{s}$

$= (40\,m)(600\,kg)\left(\frac{300}{3,6}\frac{m}{s}\right) = 2,0 \times 10^6 \frac{kg\,m^2}{s}$

N 93



$L = m v r$

$r = 50\ cm = 0{,}50\ m$

$v_2 = v_1 + 10\%$

$v_2 = \frac{11}{10} v_1$

DALLA CONS. DEL MOMENTO ANGOLARE

$m r v_1 = m (r - \Delta r) v_2$

$r v_1 = (r - \Delta r)\, 1{,}1\, v_1$

$\frac{r}{1{,}1} = r - \Delta r$

$\Delta r = r - \frac{r}{1{,}1} = \frac{1{,}1 r - r}{1{,}1} =$

$= \frac{0{,}1}{1{,}1} r = \frac{0{,}1}{1{,}1} 50\ cm \cong 4{,}5\ cm$

$$v = \omega r$$

$$\omega = \frac{v}{r}$$

$$\omega_2 = 1{,}1\,\omega_1$$

$$\frac{v_2}{r_2} = 1{,}1\,\frac{v_1}{r_1}$$

$$v_2 = 1{,}1\,v_1\,\frac{r_2}{r_1}$$

$$m\,v_1\,r_1 = m\,v_2\,r_2$$

$$v_1\,r_1 = 1{,}1\,v_1\,\frac{r_2}{r_1}\,r_2$$

$$r_1^2 = 1{,}1\,r_2^2$$

$$r_2 = \sqrt{\frac{r_1^2}{1{,}1}} =$$

$$= \frac{50\ \text{cm}}{\sqrt{1{,}1}} =$$

$$= 47{,}67\ \text{cm}$$

$$\Delta r = 50\ \text{cm} - 47{,}67\ \text{cm} \simeq 2\ \text{cm}$$