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(1)

$$\begin{aligned} a &= \omega^2 r \\ &= (2)^2 \times 1.5 \\ &= \underline{\underline{6 \text{ m/s}^2}} \end{aligned}$$

(2)

$$\begin{aligned} a &= \frac{v^2}{r} \\ &= \frac{(3)^2}{0.5} \\ &= \underline{\underline{18 \text{ m/s}^2}} \end{aligned}$$

(6)

$$\begin{aligned} F &= m \omega^2 r \\ &= 1.5 \times \left( \frac{600 \times 2\pi}{60} \right)^2 \times 0.1 \\ &= \underline{\underline{(60\pi^2) \text{ N}}} \end{aligned}$$

(10)

$$\begin{aligned} F &= m \omega^2 r \\ 18 &= 2 \omega^2 \times 0.25 \\ 36 &= \omega^2 \\ \underline{\underline{\omega = 6 \text{ rad/s}}} \end{aligned}$$