Page 313 Ex 13B

(1)

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

(2)

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

(6)

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

(10)

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