

Exercise 8-4

(a) $\uparrow +$

$$v = v_0 + at$$

$$\therefore 0 = -12 + a(3.0 \times 10^{-3})$$

$$\therefore a = +4.0 \times 10^3 \text{ m/s}^2$$

\uparrow up

$\therefore a$ is $4.0 \times 10^3 \text{ m/s}^2$ upward

(b)

$$\Sigma F = ma$$

$$= (0.66)(4.0 \times 10^3)$$

$$= +2.6 \times 10^3 \text{ N}$$

\therefore the force is $2.6 \times 10^3 \text{ N}$ upward,

exerted by the brick on the hand