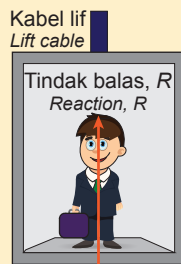# GERAKAN LIF
MOVEMENT OF LIFT

Gerakan lif
Movement of lift

(a) Lif pegun / bergerak dengan halaju malar
Lift is stationary / moving at constant velocity

Kabel lif
Lift cable

Tindak balas, R
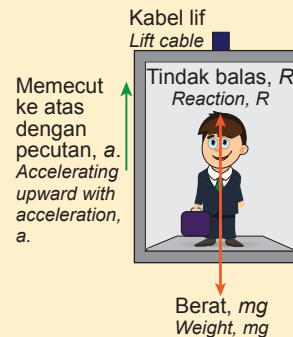*Reaction, R*

Berat, mg
Weight, mg

Apabila lif itu pegun atau bergerak dengan halaju malar, daya-daya yang bertindak adalah dalam keseimbangan. Maka,

Tindak balas = Berat
$$R = mg$$

When the lift is stationary or moving with a constant velocity, the forces are in equilibrium. Therefore,

Reaction, = Weight
$$R = mg$$

(b) Lif memecut ke atas
Lift is accelerating upward

Kabel lif
Lift cable

Memecut ke atas dengan pecutan, a.
Accelerating upward with acceleration, a.

Tindak balas, R
Reaction, R

Berat, mg
Weight, mg

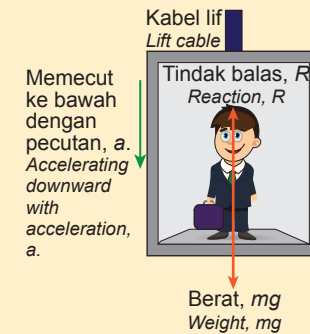Daya paduan yang bertindak ke atas = $R - mg$.
Maka,

$$R - mg = ma$$
$$R = mg + ma$$

Net force acting upward = $R - mg$.
Therefore,

$$R - mg = ma$$
$$R = mg + ma$$

(c) Lif memecut ke bawah
Lift is accelerating downward

Kabel lif
Lift cable

Memecut ke bawah dengan pecutan, a.
Accelerating downward with acceleration, a.

Tindak balas, R
Reaction, R

Berat, mg
Weight, mg

Daya paduan yang bertindak ke bawah = $mg - R$.
Maka,

$$mg - R = ma$$
$$R = mg - ma$$

Net force acting downward = $mg - R$.
Therefore,

$$mg - R = ma$$
$$R = mg - ma$$