

Kinematics

(1)



Position

Displacement

$$\Delta s = s_f - s_i$$

length: e.g. m

Distance

Velocity

$$v = \frac{\Delta s}{\Delta t}$$

$$= \frac{s_f - s_i}{t_f - t_i}$$

length
time e.g. $\frac{m}{s}$

[Speed]

[Acceleration]

$$a = \frac{\Delta v}{\Delta t}$$

$$= \frac{v_f - v_i}{t_f - t_i}$$

vel.
time e.g. $\frac{m/s}{s}$

How velocity is changing.

[Speeding up
Slowing down]

[Direction movement
is in]

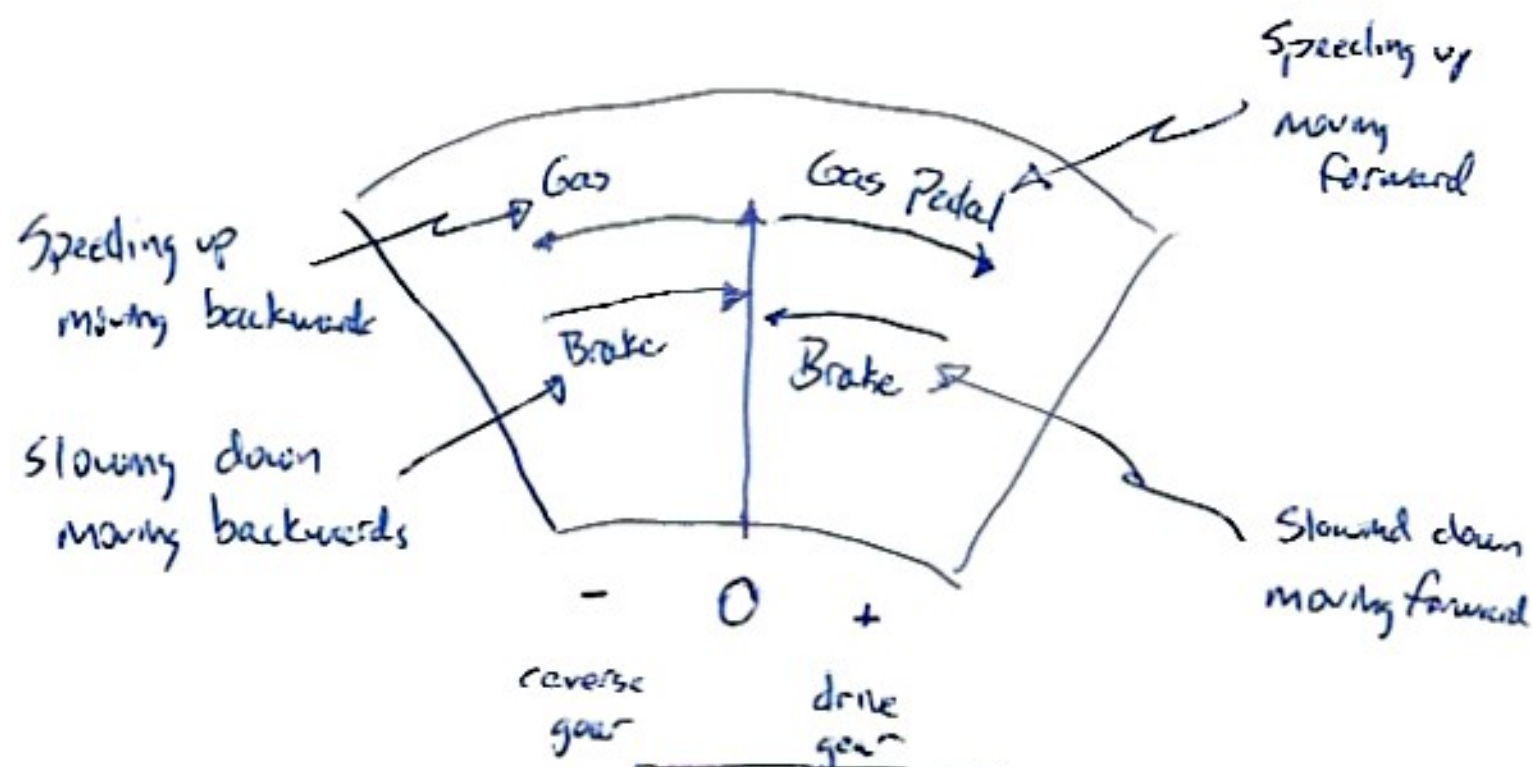
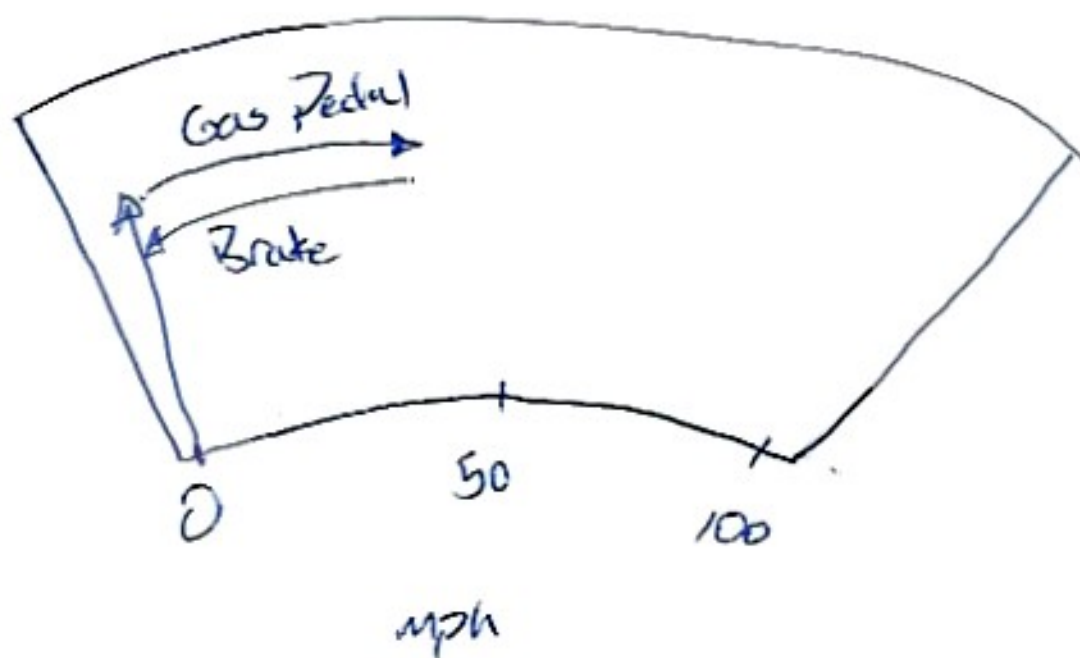
constant

$\Rightarrow$

$$a = 0 \text{ m/s}^2$$

(1)

(2)

"Drive"

$$\Sigma F = ma$$

"Drive"
"reverse"

