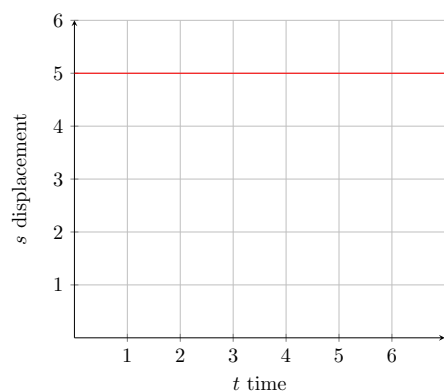
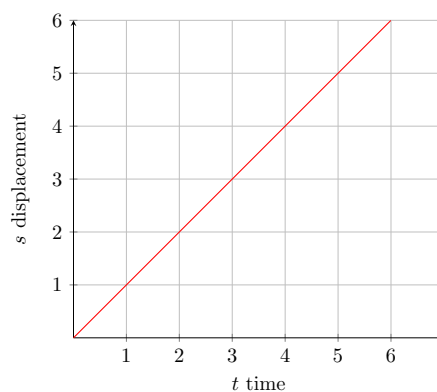


1 Graphs of motion:

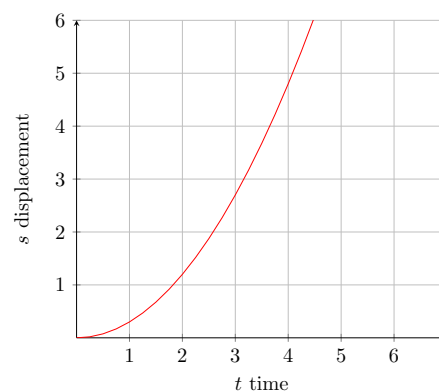
1.1 Displacement-time graphs:



No velocity

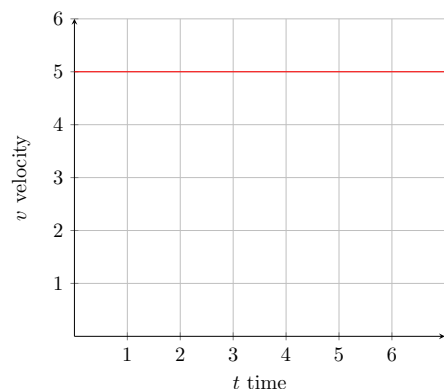


Velocity is constant

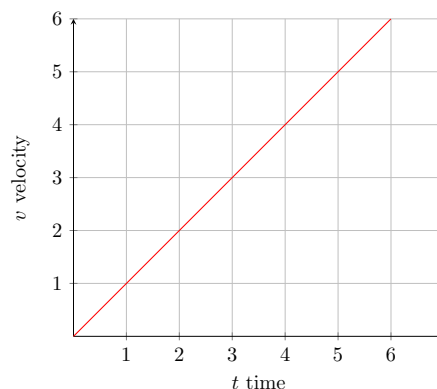


Velocity increasing

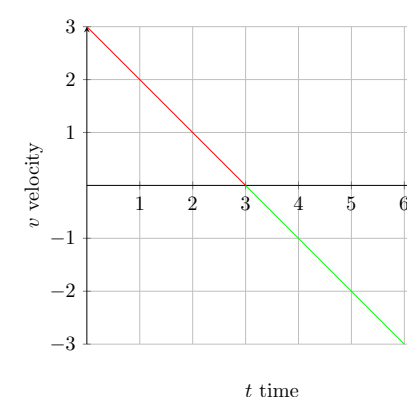
1.2 Velocity-time graphs:



Constant velocity



Constant acceleration



Deceleration, acceleration

2 Projectiles:

Vertically

$$t = \sqrt{\frac{2s}{a}} \quad (\text{s})$$

Where t is the object's **air-time**, s its **vertical displacement** from the ground, and a the **acceleration** due to gravity.

Horizontally

$$s = ut \quad (\text{m})$$

Where s is the object's **horizontal range**, t its **air-time** previously found and u its initial **push velocity**.