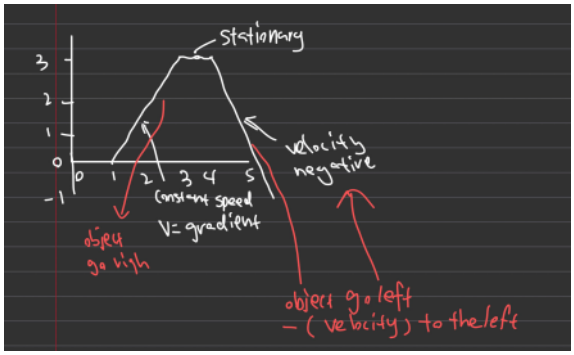
Motion graph

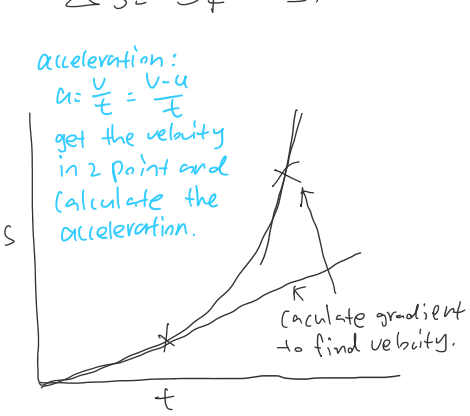
Monday, 5 February 2024 11:16 pm

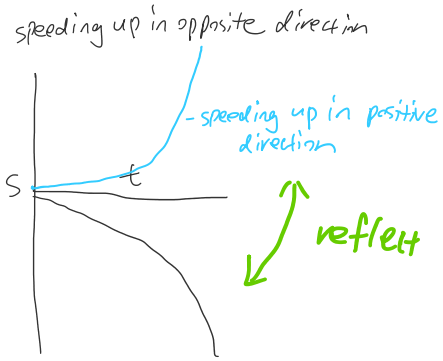
Displacement - time graph can be negative - as the object in opposite direction is longer than positive direction



Speed cannot be negative

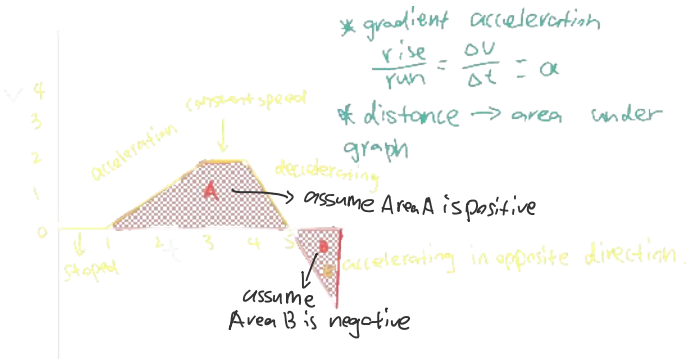
$\Delta s = s_f - s_i$





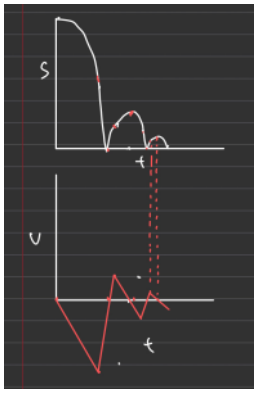
velocity - time graph

Area under the acceleration graph: the change of velocity in certain time intervals

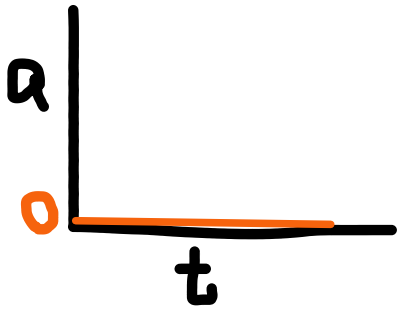


distance = |Area A| + |Area B|

displacement = |Area A| - |Area B|



Motion graph of ball drop



When the acceleration is zero, the doesn't shows that position do not change, it only shows the acceleration is 0, it is likely the object move in the constant speed

The area under the acceleration shows the change of the velocity
Eg when t = 1 the v = 2, when t = 4 , the v = -2, the change of the velocity = 4

Velocity = |Area A| + |Area B|
Speed = |Area A| - |Area B|