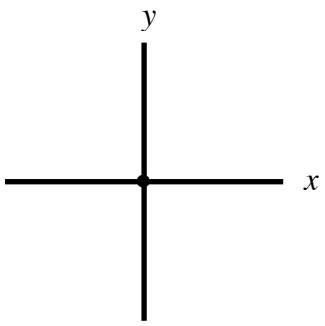
Weight of an Object

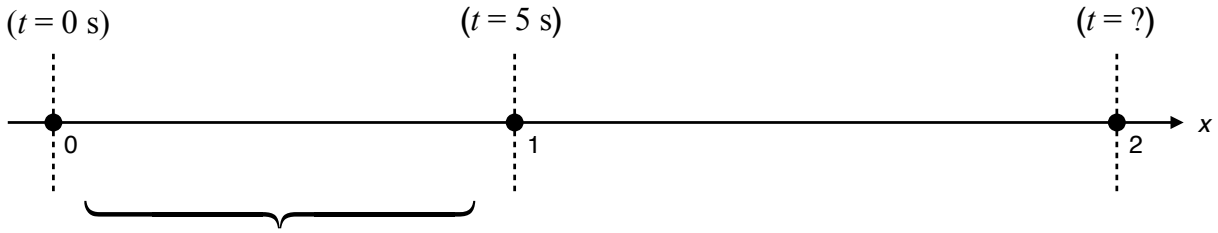
A rock is in free fall motion. Use Newton's Second Law to derive an expression for the weight of an object (in terms of the mass)?

Recall:
The weight of an object is the magnitude of the gravitational force $\boldsymbol{F}_G$ on it.



Loaded Wagon

A tractor pulls a loaded wagon of mass m = 275 kg on a level road with constant horizontal force $\boldsymbol{F}_p$ = 440 N. There's a frictional force $\boldsymbol{f}$ = 100 N opposing its motion. After 5 second, the tractor releases the wagon. What is the total displacement of the wagon, if it was initially at rest?



$\Delta s = s_1 - s_0 =$

$v_i =$

$v_f =$

$a =$

$\Delta t =$