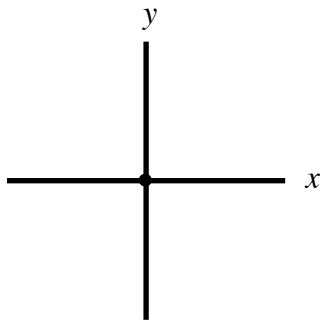


## Weight of an Object

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)?

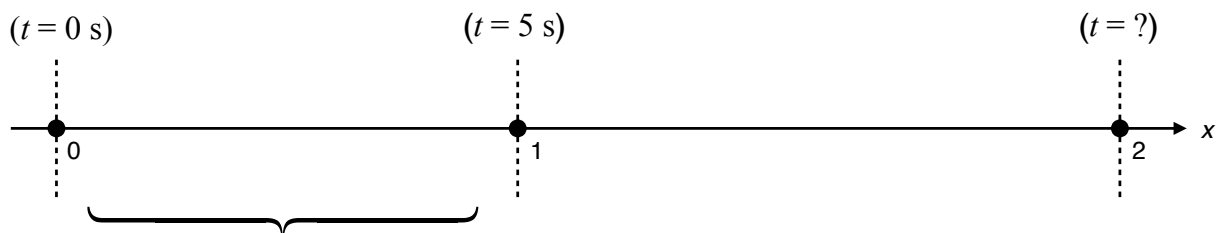
Recall:

The weight of an object is the magnitude of the gravitational force  $F_G$  on it.



## Loaded Wagon

A tractor pulls a loaded wagon of mass  $m = 275$  kg on a level road with constant horizontal force  $F_p = 440$  N. There's a frictional force  $f = 100$  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?



$$\Delta s = s_1 - s_0 =$$

$$v_i =$$

$$v_f =$$

$$a =$$

$$\Delta t =$$