

## Work done:

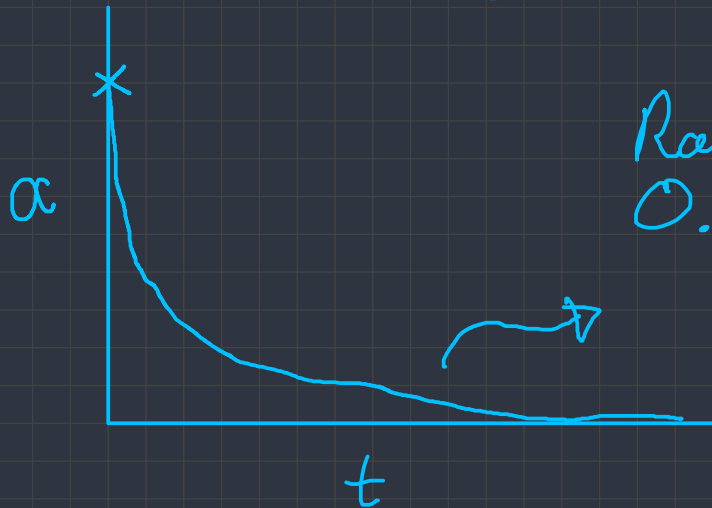
The work done is equal to the product of the force and the distance travelled in the same direction of the force.

Work done = force  $\times$  distance in direction of force

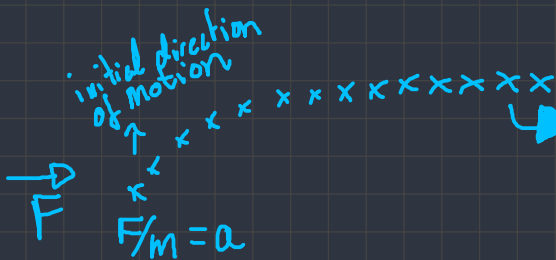
$$W = F \times s \times \cos(\alpha)$$

object  $\{t=0, v=0\}$  Where  $\alpha$  is the angle between the direction of force and the direction of motion.

object  $\{t=t, k_e = \int_0^t$



Rate of decrease of  $\alpha$  approaches 0.



$\alpha$  approaches zero as direction of motion approaches the direction of force (as speed in direction of force increases)

direction of motion

$$V_f = u_f + a_f t = u_f + \frac{F}{m} t$$

$$a = \frac{F}{m}$$

