

1. Administrative things

2. Review

3. Assignment 2

big notation

$\vec{x}(t)$

$\vec{p}(t)$

$\vec{a}(t)$

int.

int.

int.

$\Delta \vec{x}$

$\vec{v}_{avg}$

$\vec{s}_{avg}$

int.

int.

int.

$\vec{x}_i \rightarrow \vec{x}_f \rightarrow \Delta \vec{x}$

←ve

→ve

① picture

② coord. system

$\vec{x} = 1m East$

W ←

100m

50m

→ E

$t_0$

$t_1$

$t_2$

$\vec{x}_i = -1700m \quad t_i = 0$

$\vec{x}_f = +5200m \quad t_f = 6.96s$

$\Delta \vec{x} \equiv \vec{x}_f - \vec{x}_i$

$\Delta \vec{x} = 6900m$

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$\vec{x}(t) = 3.4 - 2.1t$

What is  $\vec{x}(t) = 0$ ?

$3.4 - 2.1t = 0$

$t = 1.62s$

$t_i = 1.62s \quad \vec{x}_i = 3.4 - 2.1(1.62)$

$t_f = 1.62s \quad \vec{x}_f = 3.4 - 2.1(1.62)$

$\Delta \vec{x} = \vec{x}_f - \vec{x}_i = -3.4m$

$\vec{x}_i = 3.4m \quad t_i = 0$

$\vec{x}_f = 3.4 - 2.1(1.62) = -3.4m \quad t_f = 1.62s$

$\Delta \vec{x} = \vec{x}_f - \vec{x}_i = -6.8m$

$\vec{x}_i = 3.4m \quad t_i = 0$

$\vec{x}_f = 3.4 - 2.1(1.62) = -3.4m \quad t_f = 1.62s$

$\Delta \vec{x} = \vec{x}_f - \vec{x}_i = -6.8m$

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