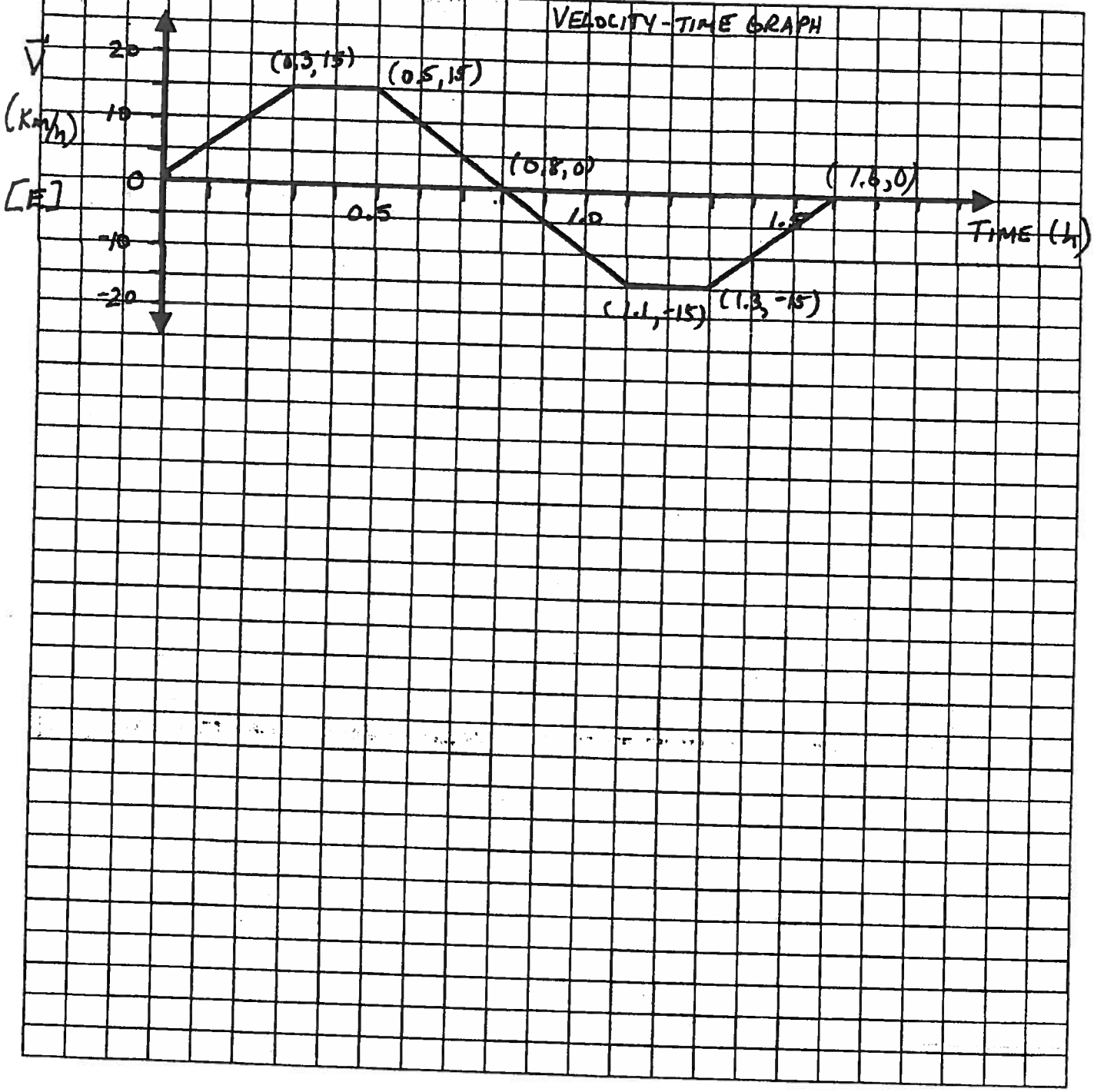
Motion Graph Analysis Practice

* Create the acceleration-time graph and position-time graph for the following graph representing a train moving on a straight track. Assume the train starts at the station (origin, 0) at time 0.

2.



Motion description:

Description:

I moving E speeding up uniformly (constant accel E)

II constant velocity E

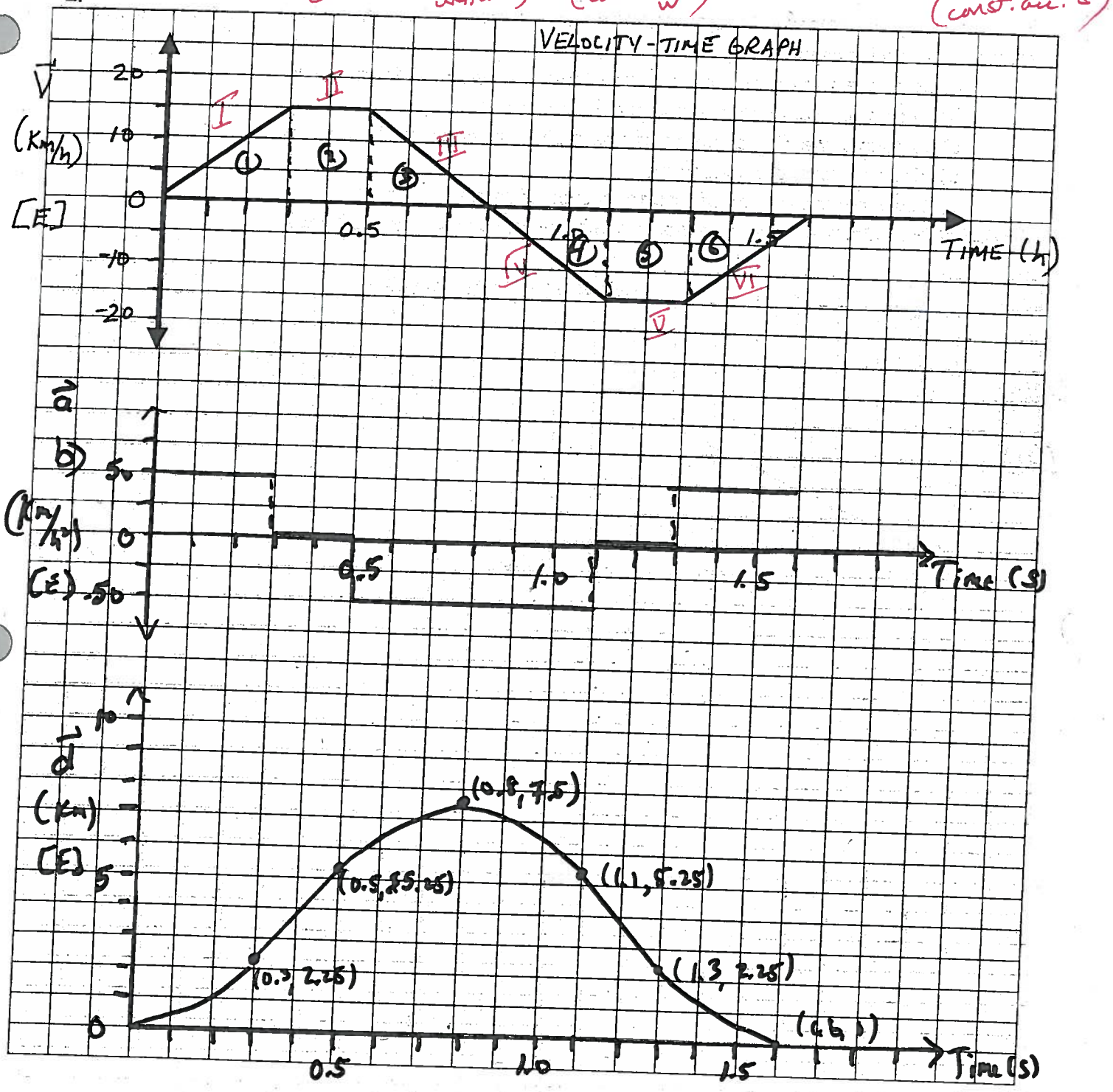
III moving E slowing down to rest uniformly

IV moving W speeding up uniformly (constant acc W)

V constant velocity W

VI moving W slowing down uniformly (const. acc. E)

2.



c) $\Delta\vec{d}_1 = 2.25\,Km\,[E]$

$\Delta\vec{d}_2 = 3.0\,Km\,(E)$

$\Delta\vec{d}_3 = 2.25\,Km\,(E)$

$\Delta\vec{d}_4 = -2.25\,Km\,[E] = 2.25\,Km\,[W]$

$\Delta\vec{d}_5 = -3.0\,Km\,(E)$

$\Delta\vec{d}_6 = -2.25\,Km\,(E)$

d) $\Delta\vec{d}_R = 0\,Km$