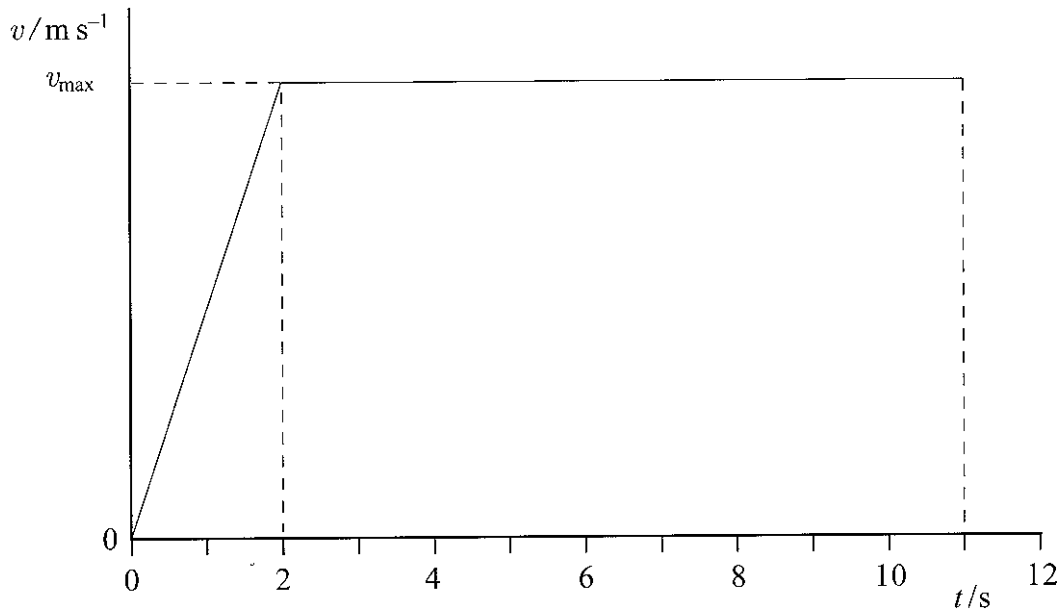


3. An athlete runs a 100 m race. The idealised graph below shows how the athlete's velocity v changes with time t for a 100 m sprint.



By considering the area under the graph, calculate the maximum velocity v_{\max} of the athlete.

.....

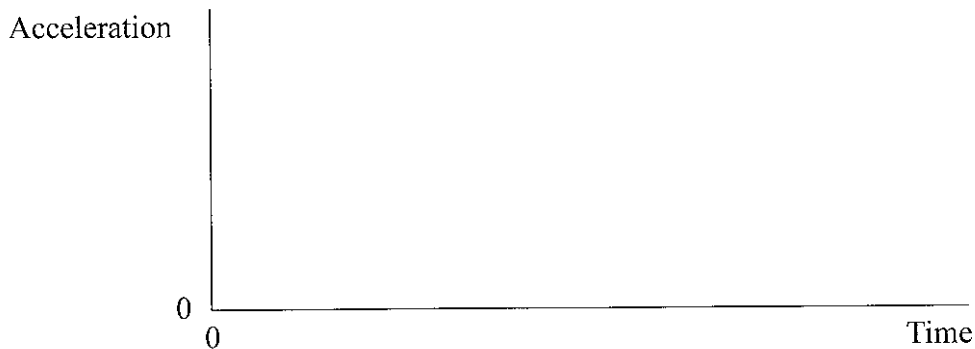
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Maximum velocity = (3)

Using the axes below, sketch a graph showing how the acceleration of this athlete changes with time during this race. Mark any significant values on the axes.



(4)

(Total 7 marks)

Q3