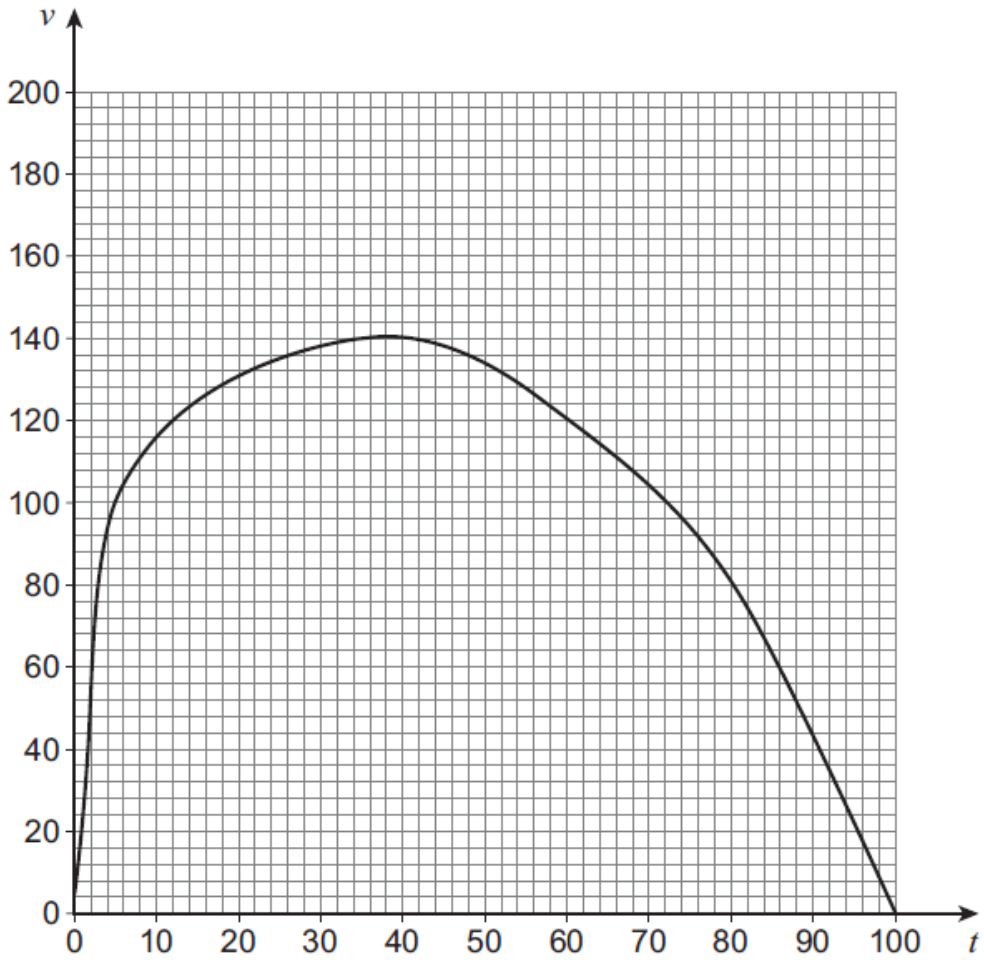
AQA – Numerical methods – A2 Mathematics P2

1. June/2020/Paper_2/No.15

A particle is moving in a straight line with velocity $v\,\text{m}\,\text{s}^{-1}$ at time t seconds as shown by the graph below.



(a) Use the trapezium rule with four strips to estimate the distance travelled by the particle during the time period $20 \leq t \leq 100$

[4 marks]

(b) Over the same time period, the curve can be very closely modelled by a particular quadratic.

Explain how you could find an alternative estimate using this quadratic.

[1 mark]