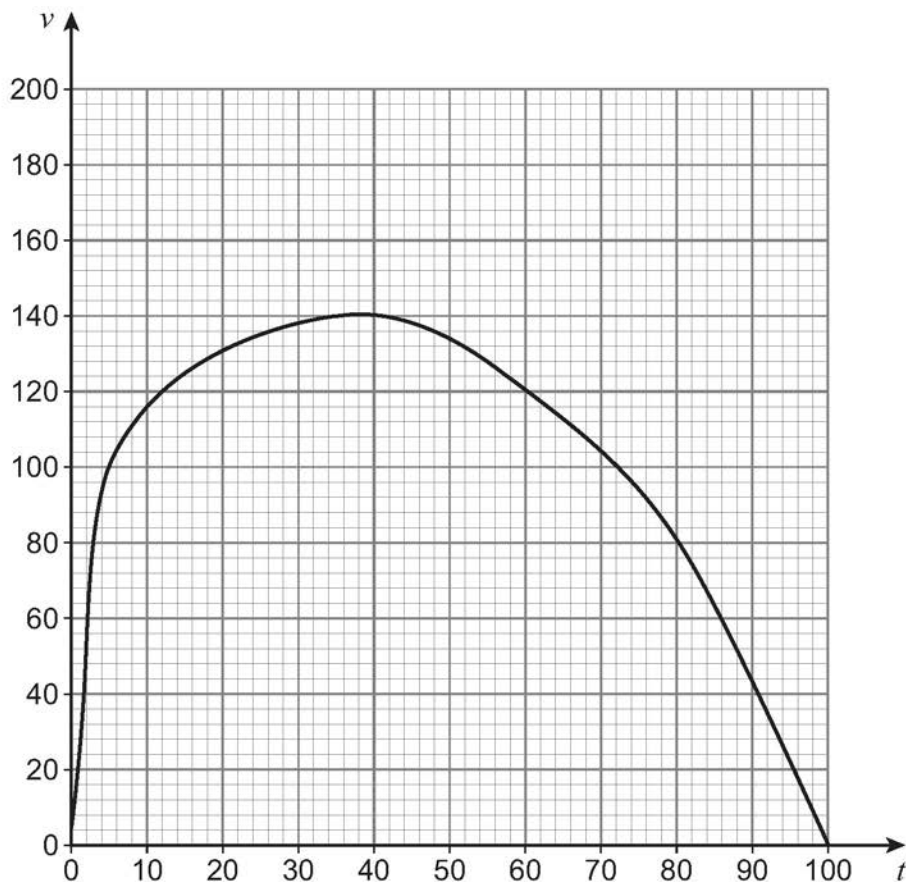


15

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



15 (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]

15 (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]