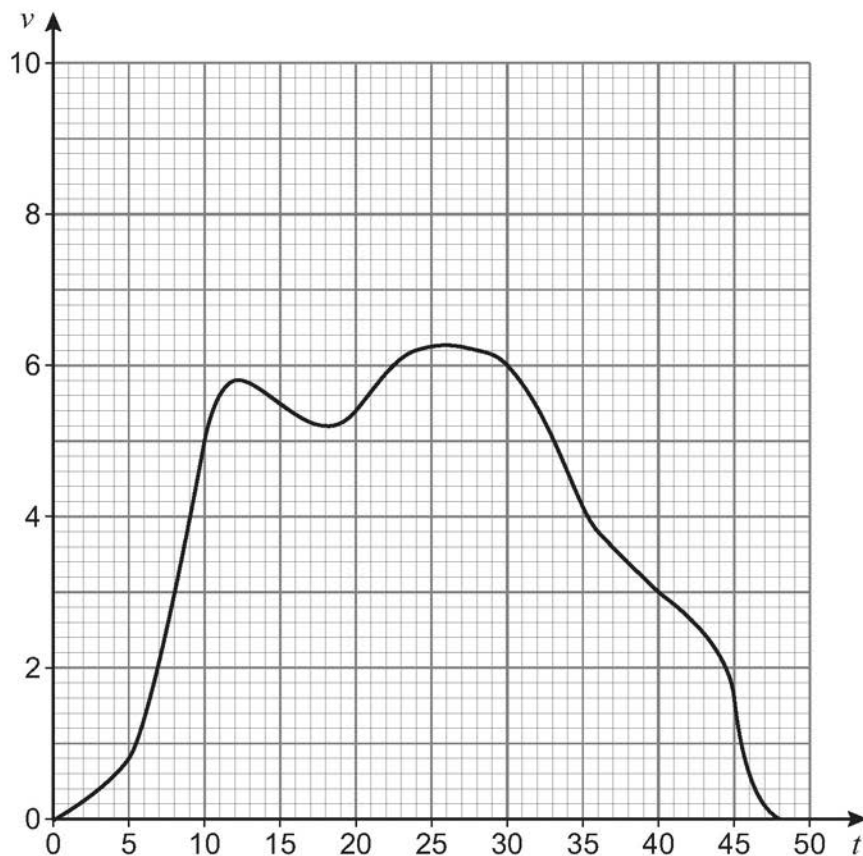


A motorised scooter is travelling along a straight path with velocity  $v \text{ m s}^{-1}$  over time  $t$  seconds as shown by the following graph.



Noosha says that, in the period  $12 \leq t \leq 36$ , the scooter travels approximately 130 metres.

Determine if Noosha is correct, showing clearly any calculations you have used.

[4 marks]