

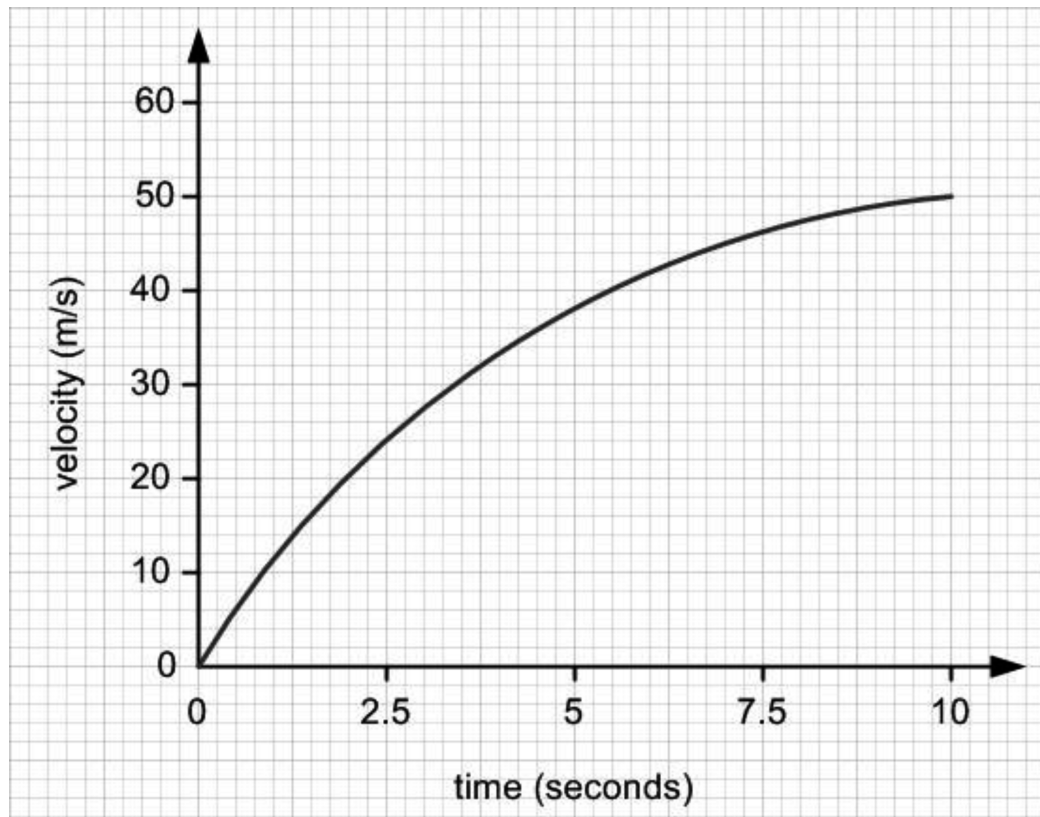
GCSE Physics A (Gateway)
J249/03 Physics A P1-P4 and P9 (Higher Tier)

Question Set 24

24

A free-fall skydiver falls from a plane and reaches terminal velocity after 15 seconds.

Look at the graph of her motion.



(a) Use the graph to find the acceleration at 5 seconds.

Answer = m/s²

[3]

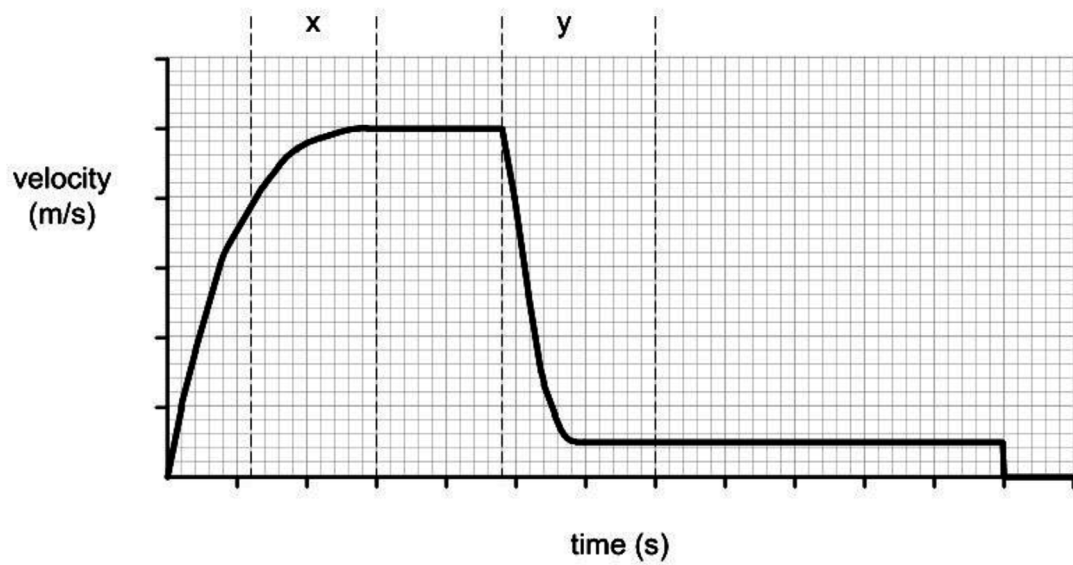
(b) Use the graph to find the distance travelled between 0 and 2.5 seconds.

Answer = m

[2]

- (c) A skydiver jumps from an aeroplane, falls towards the ground, opens her parachute and falls safely to Earth.

Look at the graph of the velocity of the skydiver as she falls.



Look at these regions of the graph:

- x
- y

Use ideas about forces to explain the motion during **x** and **y**.

[6]

Total Marks for Question Set 24: 11

OCR

Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge