

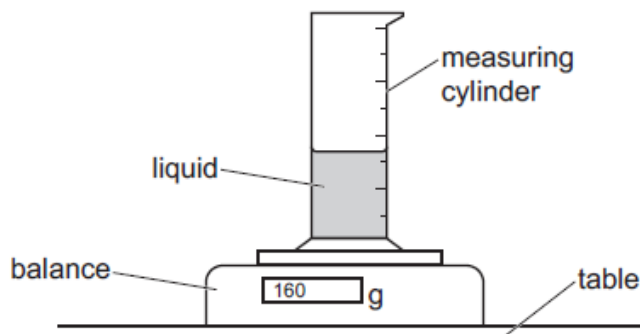
**GCSE Physics B (Twenty First Century Science)**  
**J259/04** Depth in physics (Higher Tier)

**Question Set 11**

1\* Kai is doing experiments in the laboratory to determine the density of the two different liquids, **E** and **F**.  
He uses a measuring cylinder placed on a balance.

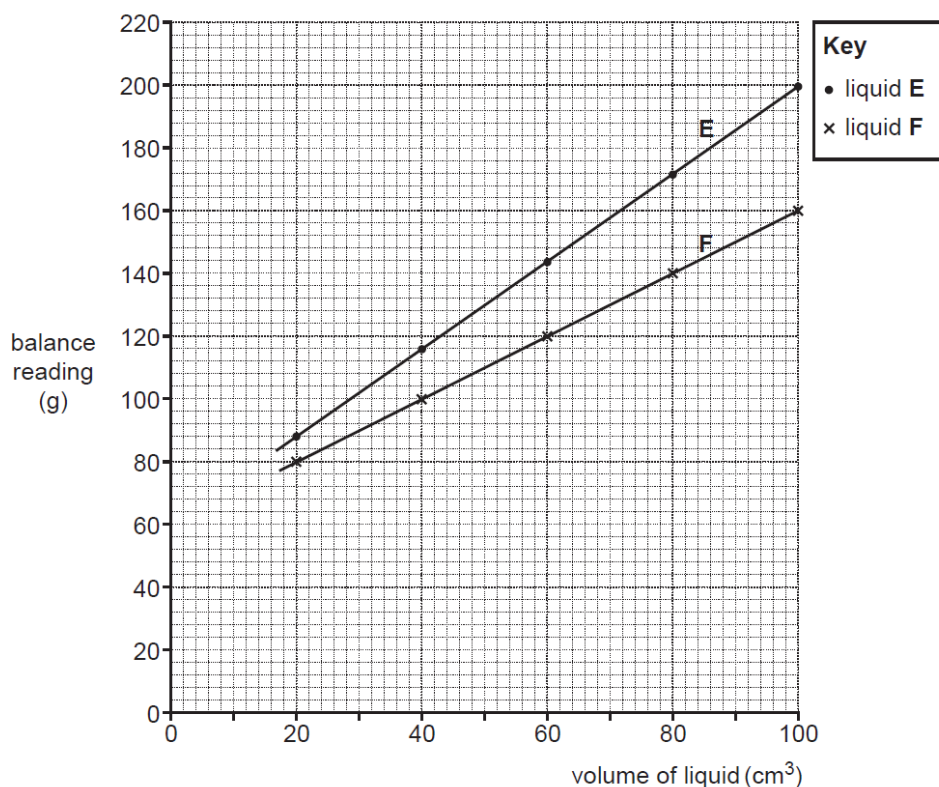
He then pours different volumes of liquid **E** into the measuring cylinder, and records the balance reading, as shown in **Fig. 2.1**. The balance reading is equal to the total mass of the measuring cylinder and the liquid.

He then empties the measuring cylinder, and repeats the same procedure with liquid **F**.



**Fig. 2.1**

Kai's results are shown in **Fig. 2.2**.



**Fig. 2.2**

Compare the density of the liquids **E** and **F**.

Your answer should include calculations and a detailed analysis of **Fig. 2.2**.

Use the equation: density = mass ÷ volume

[6]

**Total Marks for Question Set 11: 6**

---

# 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](http://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