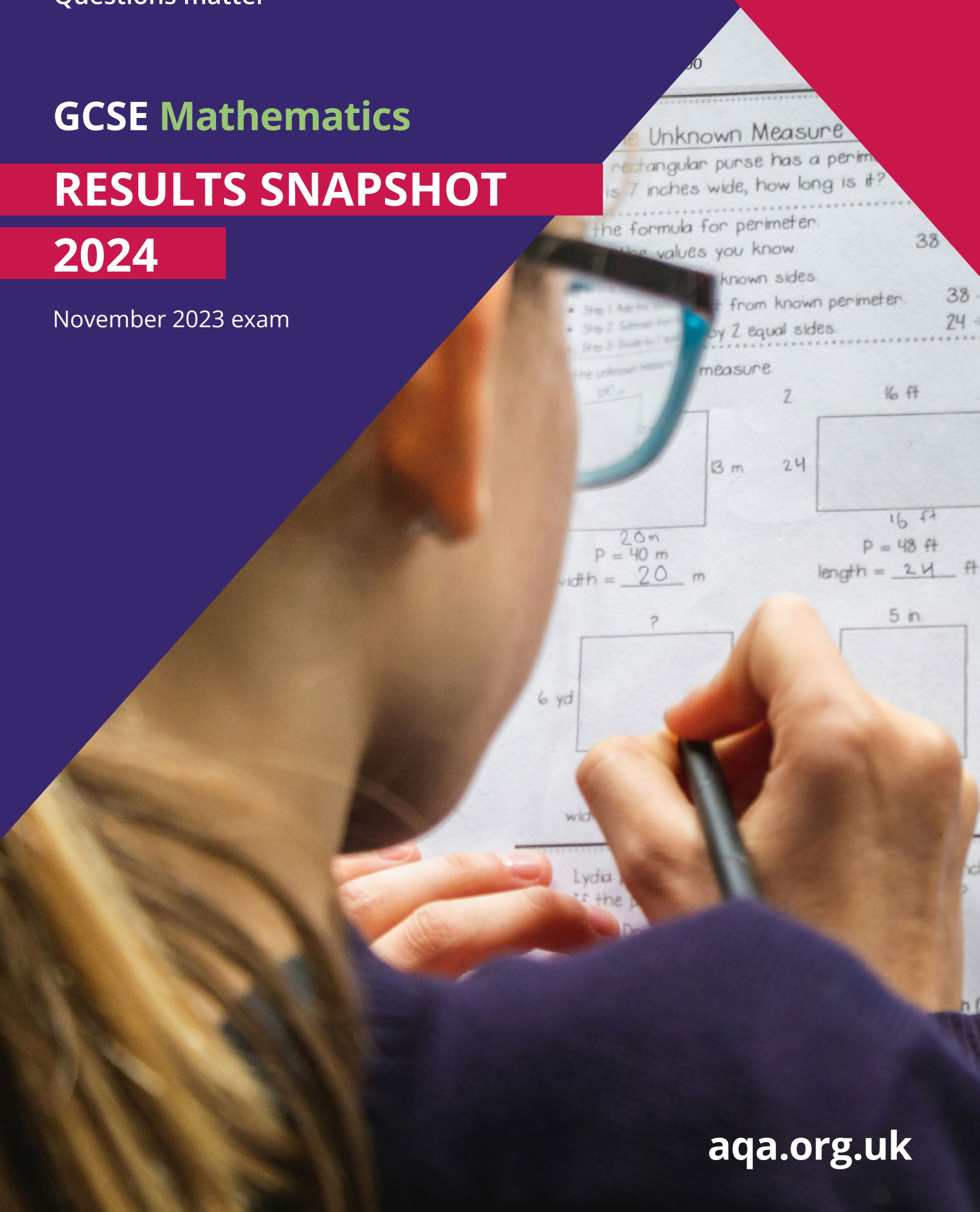
Questions matter

GCSE Mathematics

RESULTS SNAPSHOT 2024

November 2023 exam



aqa.org.uk

How to use this report

This report provides a snapshot of November's results for Foundation tier (no report available for Higher tier). It contains information on grade boundaries and performance by paper. For more information on results:

- access our free Enhanced Results Analysis tool. Find out more here: AQA | Contact us | Secure services | Enhanced Results Analysis (ERA)
- sign in to Centre Services to download the full Report on the exam for a detailed breakdown
- book on to a Feedback event. See examples from real student responses to highlight common areas where students did well and where there's room for improvement
- find out more about training for your subject by using our course finder: AQA | Professional development
- watch the GCSE Maths Inside Assessment presentation video. It covers the principles that underpin Maths mark schemes, including how marks are allocated to be fair to all students.

Content

Qualification summary

For the November 2023 exam, the entry increased by around 2000 (+11%). As usual with a post-16 entry, the overwhelming majority was for Foundation tier (96%) and this report focuses on that tier. There were some changes to the entry profile, with a number of colleges entering much larger numbers than in previous years and an increasing proportion of 18+ students. We also saw a lower proportion of the entry consisting of students who had achieved Grade 3 in previous exams (79%). In previous years, as we'd expect for an autumn resit, this has been over 90% of the entry.

Foundation tier grade boundaries

Grade	5	4	3	2	1
Boundary Nov 2023	166	135	101	67	33
Boundary Nov 2022	167	130	97	64	33
Boundary Nov 2019	162	134	98	67	27
Boundary June 2023	*189*	*158*	*117*	*76*	*39*

The grade boundaries set are close to those from previous November papers but somewhat lower than those set in Summer 2023. This is because the November papers were found to be more difficult than expected, so grade boundaries were lowered to be fair to candidates.

Grade boundaries are set using a combination of statistics and expert judgement.

Our research team uses a range of statistics to make predictions that suggest the most appropriate grade boundaries. The statistical evidence considers the prior attainment of the given cohort as well as the distribution of marks. Senior examiners then review a script sample to confirm the statistically recommended marks are sensible for the grade.

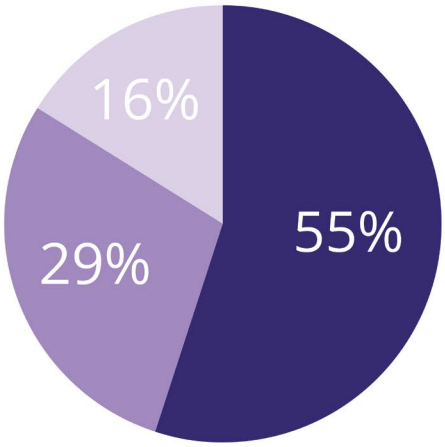
Boundary setting is overseen by Ofqual. To find more grade boundaries and learn how they're set, visit https://www.aqa.org.uk/exams-administration/results-days/grade-boundaries

GCSE Exam results statistics for November 2023 can be found on the AQA website. View the document here.

Foundation tier insights

This is a snapshot. Learn more about every question from the November 2023 series in the Reports on the exam. Visit allaboutmaths.aqa.org.uk, log in and follow: Home > GCSE Maths (8300) > November 2023 GCSE Examiner reports.

Entry by age: Foundation



55% of Foundation tier students were aged 17 or older.

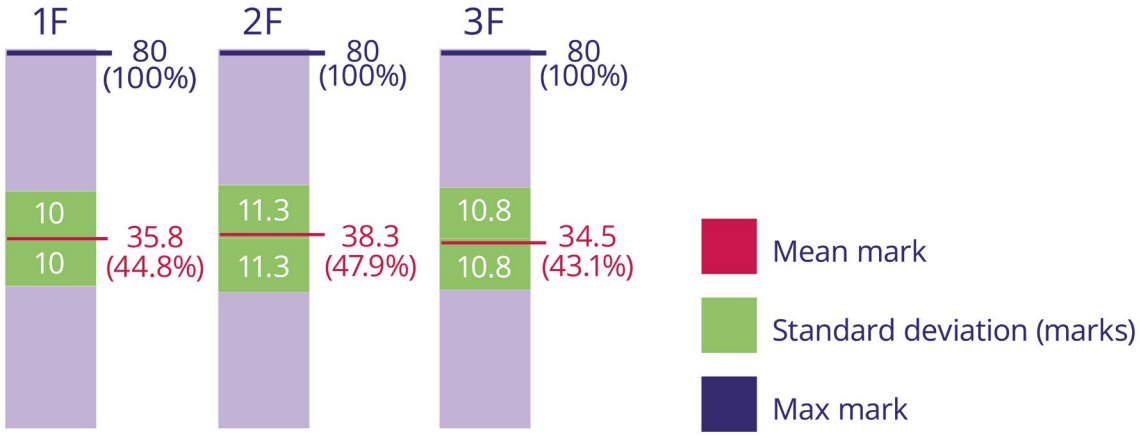
Key

Age	Entry
17*	55%
18	29%
19+	16%

*Students who reach the age of 17 before August 24 (year 12).

AQA GCSE Mathematics

Mean and standard deviation by paper: Foundation



AQA GCSE Mathematics

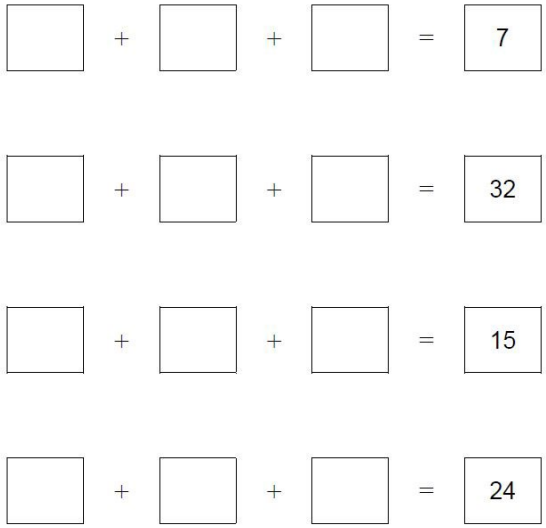
Foundation Paper 1

Areas where students did well

Question 9:

9 Put the whole numbers 1 to 12 into the boxes to make the calculations correct.
Only use each number **once**.

[3 marks]



This novel question was well answered with most students achieving two or three marks. The totals were ordered carefully to support students who started at the top and worked systematically, and the mark scheme gave 2 marks for attempts with repeated digits.

Areas where students did well

Question 13:

13 A shape has

- an even number of sides
- more sides than a square
- fewer sides than a decagon

Write down the name of **one** shape this could be.

This question was well answered with the most common answer being hexagon. The most common wrong answers were pentagon and cube.

Almost three-quarters of students answered well, getting the mark. Whilst the question clearly asked for only one shape, many students wrote down more than one. This was fine if they gave both correct answers but one correct and one incorrect shape meant no mark.

Question 22:

22 Work out the value of $(8^2 \times 8) \div (8^9 \div 8^5)$
Give your answer as a decimal.

This was a challenging question for the tier, placed late in the paper. The few successful students were those who knew and applied the rules of indices correctly. A large proportion (40%) were, however, able to pick up a single mark for a first step. Unfortunately, many students attempted to evaluate various powers of 8 which invariably led to errors and was time consuming.

Foundation Paper 2

Areas where students did well

Question 14:

14 A golf club is organising a trip for 42 people.
The costs are shown in the table.

Minibus hire	£450 per minibus
Fuel	£26 per minibus
1 game of golf	£18.50 per person

Each minibus can hold 15 people.
Each person will play 2 games of golf.
The cost of the trip will be shared equally by the 42 people.

Work out the cost per person.

[5 marks]

This question was well answered with over half of students giving fully correct solutions, despite there being a lot of information for them to deal with.

Occasionally students omitted one of the costs and sometimes they only included one game of golf per person. Working out the number of minibuses tripped up some students and those who divided and worked out 2.8 didn't always round up their value. A number of students worked out the total cost rather than the cost per person. Those who worked out the cost per person of each item from the start often lost accuracy through premature rounding.

Areas where students did less well

Question 10b:

10 Here are the salaries, in £, of the 6 workers in a company.

18 300 20 700 21 500 21 500 21 500 99 000

10 (a) Work out the mean salary.

Answer £ _____

10 (b) Why is the mean **not** the best average to represent the salaries?

_____

This was not well answered with many responses saying something about the data but not actually mentioning the mean. There was also some reluctance to offer more than a couple of words of explanation. The most common creditworthy answers were those that pointed out the anomalous £99000 salary or said that only one salary was higher than the mean.

Question 15:

15 An ordinary fair dice is rolled ten times.
Here are the first nine results.

6 1 3 2 1 5 5 5 5

Write down the probability of getting a 5 on the tenth roll.

Answer _____

This question wasn't well answered with under a quarter of students realising that the first nine results are irrelevant. Wrong answers of 4/9 or 4/10 were very common.

Foundation Paper 2

Areas where students did well

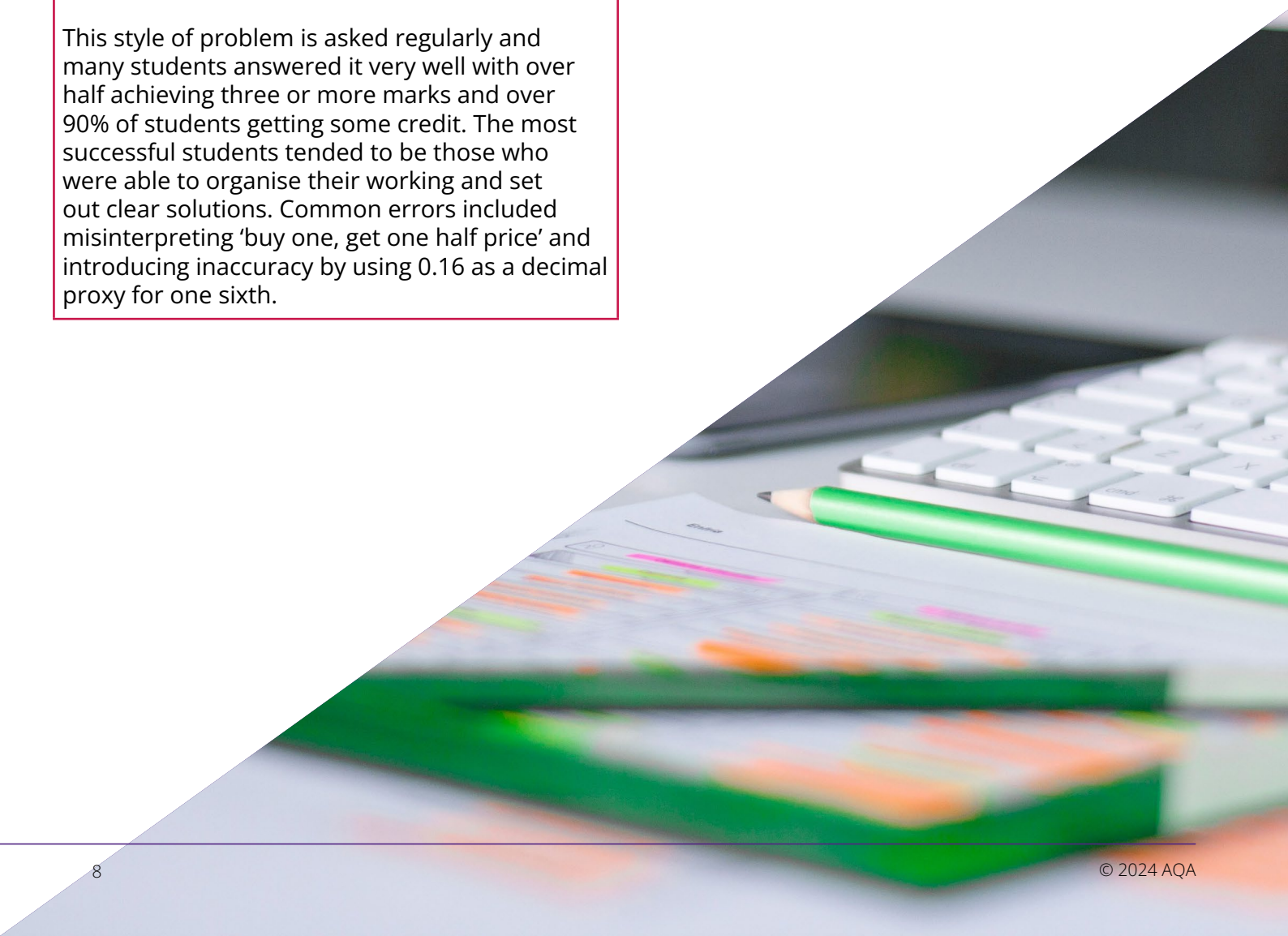
Question 23:

23 Three shops sell the same type and size of lip balm stick.

Which shop is the best value for 8 sticks and what is the total cost in that shop?
Show working to support your answer.

[5 marks]

This style of problem is asked regularly and many students answered it very well with over half achieving three or more marks and over 90% of students getting some credit. The most successful students tended to be those who were able to organise their working and set out clear solutions. Common errors included misinterpreting 'buy one, get one half price' and introducing inaccuracy by using 0.16 as a decimal proxy for one sixth.



Foundation Paper 3

Areas where students did well

Question 21:

21 Carly's total annual pay = salary + bonus

	Salary	Bonus
Last year	£26 000	£4000
This year	6% increase	9% decrease

Work out the percentage change in her total annual pay.

State whether it is an increase or a decrease.

This question was well done given its place late in the paper. Whilst few students managed to get full marks, a majority picked up 2 marks for working out the separate percentage increase and decrease. That said, a surprising number multiplied by 0.6 rather than 0.06 and very few used the most efficient approach of multiplying by 1.06 and 0.91.

Areas where students did less well

Question 12:

12 Here are the subjects available in year 12 at a school.

Block 1	Block 2	Block 3	Block 4
Maths (M)	Geography (G)	English (E)	Spanish (S)
History (H)	Drama (D)	Physics (P)	Biology (B)
French (F)	Chemistry (C)	ICT (I)	Art (A)

Students choose **three** subjects.

They **cannot** choose more than one subject from a block.

Lian decides

to study Maths

not to study Geography, Chemistry, Physics or ICT.

By listing, show that there are **seven** groups of three subjects that Lian could choose.

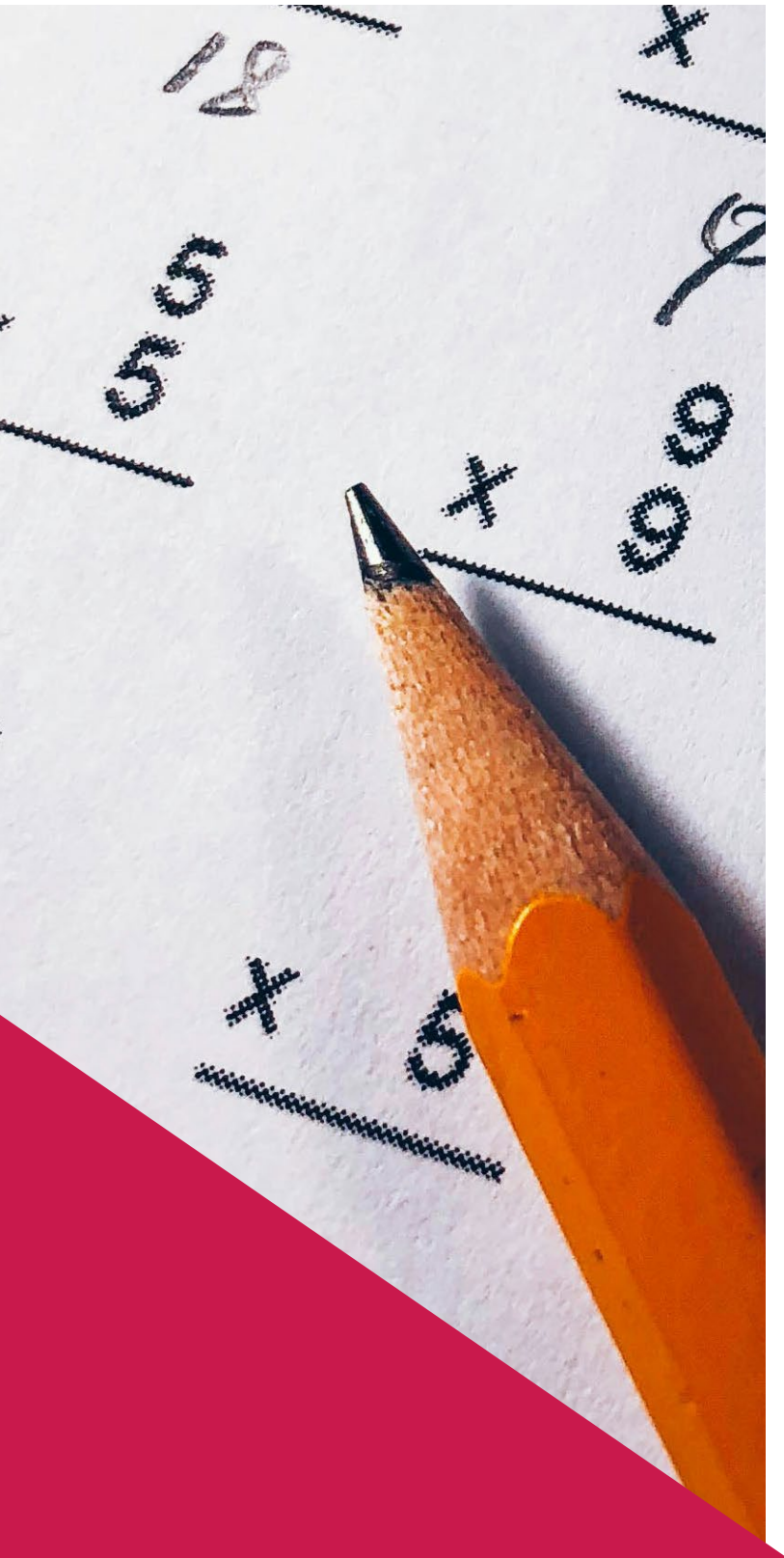
[3 marks]

Subject 1	Subject 2	Subject 3

It appears that many students were overwhelmed by the conditions in this question and often simply ignored them.

A significant number of students didn't include maths as chosen in Subject 1 and included History and French. Others incorrectly included Geography, Chemistry, Physics and ICT in their lists.

Foundation Paper 3



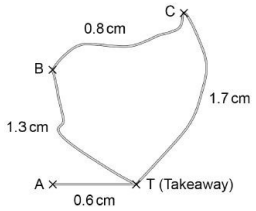
Areas where students did less well

Question 14:

14 Des delivers takeaways to houses A, B and C.

Scale: 1 cm represents 3 miles

Not drawn accurately



Des drives

from T to A and back

and

from T to B, then B to C, then C to T.

Des is paid

40p for each mile he drives

and

£1.35 for each house he delivers to.

How much is Des paid in total for this work?

[4 marks]

This question wasn't well answered and proved a greater challenge than expected around the middle of the paper. Students were uncomfortable dealing with decimal fractions of a mile and they struggled to interpret the meaning of '40p for each mile he drives'. The most successful approach was to carefully sum the distances in cm and convert once to miles.

Next steps

Access our full suite of support and resources:

Enhanced Results Analysis

Reports on the exam

Feedback events

Visit Exampro for past papers, related mark schemes and examiner comments

Watch our Inside Assessment videos to find out more about how your subject is assessed

Contact us

T: 0161 957 3852
E: maths@aqa.org.uk

aqa.org.uk

AQA
Questions matter