



General Certificate of Secondary Education

Mathematics (Modular) 4302 *Specification B*

Module 3 Foundation Tier 43003F

Report on the Examination *2007 examination - June series*

Further copies of this Report are available to download from the AQA Website: www.aqa.org.uk

Copyright © 2007 AQA and its licensors. All rights reserved.

COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

General

The paper generally proved to be accessible to candidates who were able to show their knowledge and understanding of mathematics. Candidates who showed their working were able to gain marks even if they did not obtain the correct final answer. Some candidates were disadvantaged by their poor presentation. It was pleasing to see some good work on questions set in context. The standard of arithmetic at this level continues to be a cause for concern. A significant number of candidates use build-up methods inappropriately. Answers to questions requiring explanations must be sufficiently detailed to gain full credit. Some candidates appeared to be unprepared for the more challenging topics.

Topics that were done well included:

- simple number problems
- rounding to the nearest 100
- simple money problems
- interpreting contexts in calculations.

Topics which candidates found difficult included:

- calculating with percentages
- speed
- ratio
- calculating with fractions
- bounds
- prime factors and LCM.

Question 1

Most candidates understood the requirements of this question, although a small number tried to combine the digits using operations. Many correct responses were seen to part (a). In part (b)(i), a large number of candidates ignored the requirement for an odd number, and hence wrote 2568. In part (b)(ii) candidates were given credit for rounding either of their previous answers and generally responses were good. Part (c) was well answered by most candidates.

Question 2

Parts (a) and (b) were generally well done, although some candidates selected incorrect prices from the list. In part (c) the most popular method was to build-up in units of £4.35. Many arithmetical errors were made, suggesting the lack of a calculator, but most candidates were successful.

Question 3

Many candidates could not deal with the multiplication of a number by a fraction in part (a). Those who knew the method almost always gained full marks. The notation for 'square' was generally known.

Question 4

The majority of candidates knew the correct method for this application of money, but some carelessly gave answers of 300 and 85, ignoring the pound sign. Candidates should ensure that decimal points are clearly written. However, this part was generally well attempted. Part (b) was also well answered with £2.85 the common error.

Question 5

Many correct responses to this question were seen, even though two steps were required. Some candidates obtained 495, but made no further progress. Other candidates attempted to divide 920 by 3. It was pleasing that very few used a trial and improvement method, as this was generally unsuccessful. The diagram appeared to help many candidates to succeed with this question.

Question 6

This question proved to be a good discriminator. A significant number of candidates were awarded marks in every part. Most knew that multiplication of the values 385 and 68 was required, but then made errors in trying to convert to pounds. Other candidates did not attempt to convert to pounds. In part (a), a small number of candidates obtained 261.80 but did not give their answer to the nearest pound. In part (b), few candidates coped with percentage increase in context. In part (c), answers of 65 or 66 were often seen without working. A fairly common wrong method was to work out $164 \div 2 \frac{1}{2}$ as $164 \div 2$, and then $164 \div \frac{1}{2}$.

Question 7

Only a minority of candidates were awarded any marks in this question.

Question 8

Weaker candidates find the topic of ratio very difficult. A common incorrect method was to write $3 \times 5 = 15$, and give the answer as 15. Many made no attempt at all.

Question 9

Parts (a) and (b) were very well answered. A surprisingly high number of candidates could not identify the square number in part (c). In part (d), answers of $\frac{1}{3}$ and $\frac{0}{3}$ were more frequently seen than the correct answer of $\frac{3}{10}$.

Question 10

The first three parts were usually well answered, but in part (b) a significant minority of candidates gave answers of 678 or 622. Few correct answers were seen to part (d). Many correct responses were seen to part (e), although 6 was a very common error.

Question 11

Part (a) was usually well answered. In part (b), although many candidates recognised that they needed to divide by 10, a significant number made errors or used inappropriate money notation, for example £12.5.

Question 12

In part (a), 3.1 or 3.2 were common errors. Parts (b) and (c) were more successfully answered.

Question 13

Most candidates were able to make some progress by calculating the number of men. Some then misinterpreted the question, calculating one third of the remainder as women. Other candidates attempted to start the question by adding the fractions, but with little success.

Question 14

Part (a) provided a good source of marks for most candidates. Part (b)(i) was quite well answered, perhaps because of the familiar context in which this question was set. However, in part (b)(ii) candidates often failed to discuss what had to happen in both matches to give the necessary counter-example. Others talked generally about adding odd and even integers.

Question 15

Candidates found this question very challenging. Some candidates used build-up methods, which were unsuccessful. The significance of using 50 in a non-calculator percentage problem was rarely appreciated. A common error was to subtract the two numbers.

Question 16

Only a small proportion of candidates understood prime factors. Those who did often made basic arithmetical errors. Others simply listed factors without selecting the prime factors. Part (b) was frequently not attempted, but many who did do so usually identified the highest common factor.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the <http://www.aqa.org.uk/over/stat.html> page of the AQA Website.