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Principal Examiner Feedback

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GCSE

GCSE Mathematics (2381)

Foundation Paper (5383F_09)

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1. PRINCIPAL EXAMINER'S REPORT – FOUNDATION PAPER 9

1.1 GENERAL COMMENTS

1.1.1 This paper is constructed on the premise that students have access to a calculator they are familiar with. It was clear that some candidates did not or were not. It is of some concern that a significant number of candidates cannot write money properly.

1.2 REPORT ON INDIVIDUAL QUESTIONS

1.2.1 Question 1

Students who had brought a calculator with them generally did well enough and got at least as far as 35.5. Many went on to write the correct £35.50 or the allowable £35.50p. Many had no access to a calculator and could not multiply a decimal by 10 (there were very few 3.550) but had to resort to laboriously writing out 10 lots of 3.55 and adding up. These attempts were often not successful. Some candidates got themselves confused between 35.50 and 35.05

1.2.2 Question 2

On part (a), most candidates could draw a fairly decent radius although some were clearly confused between a diameter and a radius. It was pleasing to see that many candidates could recognise a semi-circle when they saw one. The sensible 'half-circle' is not, however, a mathematical term, although 'sector' was acceptable.

1.2.3 Question 3

On part (a) most candidates were able to recognise and write down a square number. 9 was more popular than 16. A minority wrote down 3 possibly thinking of 3 squared = 9. Part (b) proved to be more of a challenge with 3 again being a popular, but incorrect answer.

1.2.4 Question 4

This was a standard money calculation question and it was surprising to see so many wrong answers. Again, candidates hurt their chances by not having a calculator, so they added up the correct five items, but got the wrong answer. If they showed a subtraction from 20 of their wrong answer, then they could at least have picked up a method mark. Many did not. The other errors were mainly of omission – some candidates found the total price of 1 medal and 1 trophy, whilst others found the correct total but then failed to subtract this from the £20.

1.2.5 Question 5

The candidates who wrote down 'hours' for part (a) certainly had a point, but the acceptable answer was 'miles' – which most candidates put down. There was some confusion between which was which out of 'miles' and 'kilometres'

1.2.6 Question 6

There were not many correct answers to part (a). Common errors were $n = 6, 1n,\ n + 6,$ and $6n = n$ 6n=n. The latter cannot be considered correct because it is not an algebraic expression. Part (b) was even more poorly answered although there was a follow through from part (a) if they had an expression which was 3 less than the expression in part (a).

1.2.7 Question 7

This proved to be pleasingly answered by those who had a calculator. Sensibly many worked out the numerator and denominator separately and wrote them down before finishing the calculation. They gained 1 mark. Interestingly, a minority of candidates carried out the wrong operation with their two answers – addition and subtraction were both seen. There were many cases of plug the numbers and signs into the calculator and write down what came about. This led to an answer of 60.50… which was frequently seen. The question did ask for all figures on the calculator display to be written down. Some candidates ignored this showing working of $73.8 \div 22.2 = 3.3,$ which scored no marks.

On part (b) the idea of significant figures proved an elusive one.

1.2.8 Question 8

This proved to be beyond most candidates at this tier. There was little evidence that many understood the concept of multiplying the terms inside by the term outside. If they did then often 2x was substituted for x2.

1.2.9 Question 9

At least one or two values in the grid were calculated correctly in many cases. The odd one out was usually the value of y when x =−1. Many candidates went on to plot their values correctly and join them up. Some pleasingly spotted that their point at $x = 1$ was 'odd' and ignored it by drawing the correct straight line. They got both the marks. At the other extreme were the candidates who completed the table correctly, plotted the points correctly, but did not join them up. This has been a recurrent theme for several years. Just as mysterious are those candidates who calculate the values in the table correctly but cannot link the table with the grid and so leave the grid blank.

1.2.10 Question 10

Many candidates did not know how to work out the volume of a cuboid so it is hardly surprising that they performed poorly on part (a) of this question. Some sensibly did a sort of trial and improvement method by using the 5 and the 4 to get the 60. They got the marks if they wrote down 3 on the answer line. Many did 60-20. Part (b) was very poorly answered with few candidates knowing the relationship between the three variables.

2. STATISTICS

2.1. MARK RANGES AND AWARD OF GRADE

Unit/Component	Maximum Mark (Raw)	Mean Mark	Standard Deviation	% Contribution to Award
5381F/05	30	21.5	5.8	20
5381H/06	30	17.3	7.1	20
5382F/07	25	15.7	4.1	15
5382H/08	25	14.8	5.5	15
5383F/09	25	13.4	5.2	15
5383H/10	25	15.4	5.6	15
5384F/11F	60	33.2	10.5	25
5384F/12F	60	39.4	11.5	25
5384H/13H	60	28.8	11.8	25
5384H/14H	60	37.6	10.6	25

GCSE Mathematics Grade Boundaries for 2381– November 2010

The table below gives the lowest raw marks for the award of the stated uniform marks (UMS).

Unit 1 – 5381

	A*	A	B	C	D	E	F	G
UMS (max: 55)				48	40	32	24	16
Paper 5381F				27	22	18	14	10
UMS (max: 80)	72	64	56	48	40	36		
Paper 5381H	29	24	17	11	7	5		

Unit 2 Stage 1 – 5382

	A*	A	B	C	D	E	F	G
UMS (max: 41)				36	30	24	18	12
Paper 5382F				21	17	14	11	8
UMS (max: 60)	54	48	42	36	30	27		
Paper 5382H	23	19	15	11	9	8		

Unit 2 Stage 2 – 5383

	A*	A	B	C	D	E	F	G
UMS (max: 41)				36	30	24	18	12
Paper 5383F				19	15	11	8	5
UMS (max: 60)	54	48	42	36	30	27		
Paper 5383H	24	21	16	12	8	6		

Unit 3- 5384

	A*	A	B	C	D	E	F	G
5384F_11F				41	33	25	17	9
5384F_12F				49	40	31	23	15
5384H_13H	51	40	29	19	10	5		
5384H_14H	58	48	38	29	17	11		

	A*	A	B	C	D	E	F	G
UMS (max: 139)				120	100	80	60	40
5384F				90	73	56	40	24
UMS (max: 200)	180	160	140	120	100	90		
5384H	108	88	68	48	27			

UMS BOUNDARIES

Maximum Uniform mark	**A***	**A**	**B**	**C**	**D**	**E**	**F**	**G**
400	360	320	280	240	200	160	120	80

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