2008 Mathematics

Standard Grade Foundation

Finalised Marking Instructions

Special Instructions

1 The main principle in marking scripts is to give credit for the skills which have been demonstrated. Failure to have the correct method may not preclude a pupil gaining credit for the calculations involved or for the communication of the answer.

Care should be taken to ensure that the mark for any question or part question is entered in the correct column, as indicated by the horizontal line.

Where a candidate has scored zero marks for any question attempted, "0" should be shown against the answer in the appropriate column.

It is of great importance that the utmost care should be exercised in adding up the marks. Where appropriate, all summations for totals and grand totals must be carefully checked.

2 The answer to one part, correct **or incorrect** must be accepted as a basis for subsequent dependent parts of a question. Full marks in the dependent part is possible if it is of equivalent difficulty.

3 Do not penalise insignificant errors. An insignificant error is one which is significantly below the level of attainment being assessed.

eg An error in the calculation of 16 + 15 would not be penalised at Credit Level.

4 Working after a correct answer should **only** be taken into account if it provides **firm** evidence that the requirements of the question have not been met.

5 In certain cases an error will ease subsequent working. **Full** credit cannot be given for this subsequent work but **partial** credit may be given.

6 Accept answers arrived at by inspection or mentally, where it is possible for the answer to have been so obtained.

7 Do not penalise omission or misuse of units unless marks have been specifically allocated to units.

8 A wrong answer without working receives no credit unless specifically mentioned in the marking scheme.

The rubric on the outside of the Papers emphasises that working must be shown. In general markers will only be able to give credit to partial answers if working is shown. However there may be a few questions where partially correct answers unsupported by working can still be given some credit. **Any such instances will be stated in the marking scheme.**

9 Acceptable alternative methods of solution can only be given the marks specified, ie a more sophisticated method cannot be given more marks.

Note that for some questions a method will be specified.

10 In general do not penalise the same error twice in the one question.

11 Accept legitimate variations in numerical/algebraic questions.

12 Do not penalise bad form eg $\sin x^0 = 0{\cdot}5 = 30^0$.

13 A transcription error is not normally penalised except where the question has been simplified as a result.

2008 Mathematics SG − Foundation Level − Paper 1

Marking Instructions

Award marks in whole numbers only

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
1 (a)	**Ans: 541** •[1] subtract 142 from 683	•[1] 541 **1K**
(b)	**Ans: 14** •[1] know how to find $\frac{1}{6}$ of 84 •[2] find $\frac{1}{6}$ of 84	•[1] $84 \div 6$ •[2] 14 **2K**
(c)	**Ans: £19** •[1] know how to find 25% of £76 •[2] carry out calculation correctly	•[1] $76 \div 4$ or $\frac{25}{100} \times 76$ •[2] £19 **2K**

NOTES:

1.

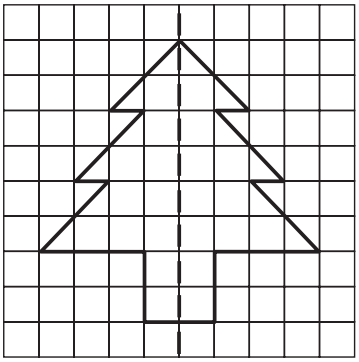
Final Answers		**with working**	**without working**
£19		2/2	2/2
£38	(50%)	1/2	0/2
£25·3 (333…)	($33\frac{1}{3}$%)	1/2	0/2
£15·2	(20%)	1/2	0/2
£7·6	(10%)	1/2	0/2

2. Where a strategy of 10% + 10% + 5% is used, the first mark may be awarded for an attempt to calculate 7·6 + 7·6 + 7·6 ÷ 2

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
2 (a)	**Ans: Brian and Morgan** •[1] state people who work on Thursday	•[1] Brian and Morgan **1K**
(b)	**Ans: Monday, Wednesday, Thursday** •[1] find two possible days •[2] find another possible day	•[1] any two possible days •[2] the third possible day **2R**

NOTES:

1. If **four** days are given, including Monday, Wednesday and Thursday, award 1/2
2. If more than four days are given, award 0/2

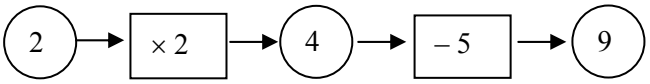
Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
3	**Ans: 460 miles** •[1] know how to find distance •[2] find correct distance	•[1] 4×115 •[2] 460 **2K**
NOTES: 1. For an answer of 28·75 (115 ÷ 4) award 0/2		
4	**Ans:**  •[1] any 2 lines correct •[2] another 2 lines correct •[3] another 2 lines correct •[4] correctly complete diagram	•[1] evidence •[2] evidence •[3] evidence •[4] correctly completed diagram **4R**
NOTES:		

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
5	**Ans: hat** •[1] interpret first letter •[2] interpret second letter •[3] interpret third letter	•[1] h •[2] a •[3] t **3R**
NOTES:		
6	**Ans: correctly drawn angle of 80 (±2)º** •[1] correctly draw angle	•[1] 80 (±2)º **1K**
NOTES:		
7	**Ans: 138 metres** •[1] know how to find length in metres •[2] multiply correctly	•[1] $13 \cdot 8 \times 10$ •[2] 138 **2K**
NOTES: 1. For an answer of 130·8, with or without working award 1/2		

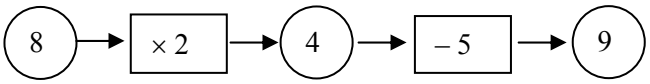
Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
8 (a)	**Ans: 20** •[1] complete calculation correctly	•[1] 20 **1K**
(b)	**Ans: 7 and 14 entered correctly** •[1] start to complete number machine •[2] correctly complete number machine	•[1] 14 •[2] 7 **2R**

NOTES:

1. Some common answers.



award 1/2



award 0/2

9	**Ans: 5 August** •[1] know how to find last day •[2] find last day	•[1] July 15 + 21 days •[2] 5 August **2K**

NOTES:

1.	6th August	with or without working	award 1/2
2.	5th of any month	with or without working	award 1/2
3.	36	without working	award 0/2

KU 14 marks
RE 11 marks

[END OF PAPER 1 MARKING INSTRUCTIONS]

2008 Mathematics SG − Foundation Level – Paper 2

Marking Instructions

Award marks in whole numbers only

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
1	**Ans: £1.25** $\bullet^1\bullet^2$ strategy $\bullet^3$ divide and multiply correctly and convert to £	$\bullet^1\bullet^2$ $75 \div 3 \times 5$ (award 1 for $75 \div 3$ or 75×5) $\bullet^3$ 1.25 **3K**

NOTES:

1. SOME COMMON ANSWERS

(£) 0·45	$(0 \cdot 75 \div 5 \times 3)$	with or without working	award 2/3
(£) 0·25 or 25 (p)	$(75 \div 3)$	with or without working	award 1/3
(£) 3·75 or 375 (p)	(75×5)	with or without working	award 1/3
45 (p)	$(75 \div 5 \times 3)$	with or without working	award 1/3

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
2	**Ans:**	

Number of Bananas	Tally	Frequency
4	|	1
5	|	1
6	|||	3
7	𝍸 ||	5
8	||	2
9	|||	3

	•[1] communicate information in tabular form	•[1] two frequencies correct
	•[2] communicate information in tabular form	•[2] another two frequencies correct
	•[3] communicate information in tabular form	•[3] another two frequencies correct **3K**

NOTES:

1. If the frequency column is blank and **frequencies** are given in tally column, then apply marking instructions.

2. If the frequency column is blank or entries show misunderstanding of frequency but
   (a) all tallies are correct — award 2/3
   (b) 4 or 5 tallies correct — award 1/3

3. If the entries in the frequency column show misunderstanding of frequency but
   (a) all frequencies correctly shown in tally column — award 2/3
   (b) 4 or 5 frequencies correctly shown in tally column — award 1/3

4. If frequencies are shown in correct column, but tally marks show number of bananas, then apply marking instructions.

5. SOME COMMON ANSWERS

4	|	4
5	|	5
6	|||	18
7	𝍸	35
8	||	16
9	|||	27

award 2/3

4	1	4
5	1	5
6	3	18
7	5	35
8	2	16
9	3	27

award 2/3

4	||||	1
5	𝍸	1
6	𝍸 |	3
7	𝍸 ||	5
8	𝍸 |||	2
9	𝍸 ||||	3

award 3/3

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
3 (a)	**Ans:** Number of squares: 1, 2, 3, 4, 5, 6, , 10 Number of rectangles: 6, 9, **12**, **15**, **18**, **21**, , **33**	
	•[1] interpret diagram and continue pattern •[2] continue pattern •[3] know how to extend pattern •[4] extend pattern	•[1] 12 •[2] 15, 18, 21 •[3]•[4] 33 (award 1 for evidence of extended pattern but with 1 error) **4R**

NOTES:

1. FOLLOW THROUGH ERRORS
   3/4 can be awarded for a "correct" continuation with one error

eg	6, 9, 11, 13, 15, 17	…….	25	award 3/4
	6, 9, 11, 14, 17, 20	……	32	award 3/4
	6, 9, 13, 16, 19, 22	……	34	award 3/4
	6, 9, 13, 17, 21, 25	……	41	award 3/4
	6, 9, 13, 18, 24, 31	……	69	award 3/4
	6, 9, 14, 21, 30, 41	……	105	award 3/4

(b)	**Ans:** **× 3 + 3 or + 1 × 3** •[1]•[2] generalise pattern	•[1]•[2] × 3 + 3 or equivalent **2R**

NOTES:

1. Accept "bad form" eg squares + squares + squares + 3
2. Do not accept eg "it goes up in threes" or "add on three for each square"
3. Where a follow through error has been made in part (a), 1/2 may be awarded for a rule which is true for **at least three** of the entries made by the candidate eg for 6, 9, 11, 13, 15, 17 … 25 in part (a) followed by × 2 + 5 in part (b) award 1/2 in part (b)
4. A mark of 1/2 may **only** be awarded for the situation described in note 3.

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
4 (a)	**Ans: £85** •[1] know to add 59 and 26 •[2] add correctly	•[1] 59 + 26 •[2] 85 **2K**
(b)	**Ans: Yes, with valid reason** •[1] begin strategy •[2] continue strategy •[3] carry out all calculations correctly (must include decimals) •[4] state conclusion and give reason	•[1] add two items **or** subtract one item from £85 (see Note 1) •[2] add three items **or** subtract two items from £85 (see Note 2) •[3] must include addition of three items **or** subtraction of two items from £85 •[4] yes, with valid reason (must refer to two amounts **or** difference between them – see Note 3) **4R**

NOTES:

1. The first mark may be awarded for one of the following:
   39·99 + 10·99, 39·99 + 30, 10·99 + 30
   85 – 39·99, 85 – 10·99, 85 – 30

2. The first two marks may be awarded for one of the following:
   39·99 + 10·99 + 30, 85 – (39·99 + 10·99)
   85 – (39·99 + 30), 85 – (10·99 + 30)

3. SOME ACCEPTABLE VALID REASONS
   Yes, 80·98 < 85
   Yes, 34·02 > 30
   Yes, 15·01 > 10·99
   Yes, 44·01 > 39·99
   Yes, he has 4·02 left

4. SOME ANSWERS ACCEPTABLE FOR PARTIAL MARKS
   (**with or without working**)
   From Note 1:
   50·98, 69·99, 40·99, 45·01, 74·01, 55 award 1/4

   From Note 2:
   80·98, 34·02, 15·01, 44·01 award 3/4

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
5	**Ans: 0.3 cubic metres** •[1] know how to find volume of the cuboid •[2] correctly calculate volume	•[1] $1.5 \times 1 \times 0.2$ •[2] 0.3 **2K**
NOTES: 1. For working subsequent to a correct answer, eg correct answer ÷ 2, with working, award 1/2		
6	**Ans: £16.2(0)** •[1] know how to calculate interest •[2] find interest correctly	•[1] 540 × 3 ÷ 100 (must be evidence of × 3 **and** ÷ 100) •[2] 16.2(0) **2K**
NOTES: 1. For an answer of £556·2(0) (540 + 16·20), with or without working award 2/2 2. SPECIAL CASES (with or without working) £162 (540 × 3 ÷ 10) award 1/2 £194.4(0) (540 × 3 ÷ 100 × 12) award 1/2		

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
7	**Ans: 40 days** $\bullet^1\bullet^2$ strategy $\bullet^3$ correctly deal with units $\bullet^4$ carry out both calculations correctly	 $\bullet^1\bullet^2$ $£60 \div (30 \times 5p)$ (award 1 for $£60 \div 30$, $£60 \div 5p$ or $30 \times 5p$) $\bullet^3$ $60 \div (30 \times 0.05)$ or equivalent $\bullet^4$ 40 **4R**

NOTES:

1. SOME COMMON ANSWERS (with or without working)

4	$(60 \div (30 \times 0 \cdot 5))$	award 3/4
0·4	$(60 \div (30 \times 5))$	award 3/4
1200	$(60 \div 0 \cdot 05)$	award 2/4
12	$(60 \div 5)$	award 1/4
(£) 2 or 200 (p)	$(£60 \div 30)$	award 1/4
(£) 1·50 or 150 (p)	$(30 \times 5p)$	award 1/4

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
8 (a)	**Ans: 2.04 square metres** •[1] know how to find area of glass •[2] correctly calculate area of glass	•[1] 1.2×1.7 •[2] 2.04 **2K**

NOTES:

1. For working subsequent to a correct answer, eg correct answer ÷ 2, with working, award 1/2

(b)	**Ans: £14.79** •[1] know how to find cost of glass •[2] correctly calculate cost	•[1] 2.04×7.25 •[2] 14.79 **2K**

NOTES:

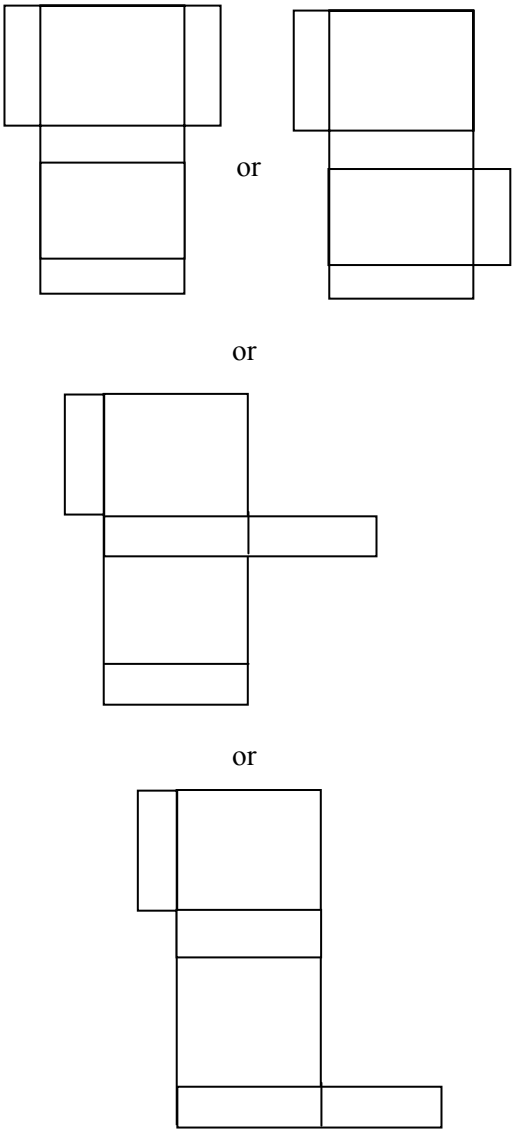
1. SOME COMMON ANSWERS (with or without working)

   £14.5(0) (2 × 7.25) award 1/2
   £21.75 (3 × 7.25) award 1/2

2. Where a candidate rounds the answer in part (a), up or down, to a whole number, only 1 mark is available in part (b).

3. Where the answer has more than two decimal places, the second mark can only be awarded for a rounded answer.

   (eg 2.9 × 7.25 = 21.025, accept £21.02 or £21.03)

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
9	**Ans: correctly complete net**  •[1] correctly complete net	•[1] evidence **1R**

NOTES:

1. Allow a tolerance of 0.3 cm horizontally.

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
10 (a)	**Ans: 1.45 pm** •[1] give correct answer as a 12-hour time	•[1] 1.45 pm **1K**
(b)	**Ans: 45 minutes** •[1] know to find time difference •[2] correctly calculate time difference	•[1] 1330 − 1245 •[2] 45 minutes **2K**
NOTES: 1. For an answer of 85 min (1330 – 1245 in base 10) with or without working, award 1/2		
(c)	**Ans: 40 minutes** •[1] identify time of meeting •[2] identify time of parting •[3] calculate time interval	•[1] 12 50 •[2] 13 30 •[3] 40 minutes **3R**
NOTES: 1. For a **final** answer of 55 min (1345 – 1250), with working award 2/3 (1st and 3rd marks) 2. For an answer of 55 min without working award 1/3 3. Where 55 min appears as part of a longer incorrect strategy award 1/3 4. If the answer to part (c) is 5 minutes less than the answer to part (b), with or without working award 3/3 (eg 85 min for part (b) followed by 80 min for part (c))		

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
11	**Ans: 48 centimetres** •[1] know how to calculate diameter •[2] know how to calculate length •[3] carry out calculations correctly (must involve doubling and addition of 8)	•[1] 2×10 •[2] $2 \times 2 \times 10 + 8$ •[3] 48 **3R**
NOTES: 1. SOME COMMON ANSWERS 28 with or without working award 2/3 20 with or without working award 1/3 40 with or without working award 1/3		
12 (a)	**Ans: 760 metres** •[1] know how to find perimeter •[2] calculate perimeter correctly	•[1] $2 \times 200 + 2 \times 180$ •[2] 760 **2K**
(b)	**Ans: 16 rolls** •[1] know how to calculate number of rolls •[2] divide correctly •[3] round up to whole number of rolls	•[1] $760 \div 50$ •[2] 15.2 •[3] 16 **3K**
NOTES: 1. Where no rounding is required, the third mark is not available.		

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
13 (a)	**Ans: 30** $\bullet^1$ interpret graph	$\bullet^1$ 30 **1K**
(b)	**Ans: Programme E used 25 times indicated on graph** $\bullet^1$ correctly complete graph	$\bullet^1$ evidence **1K**
(c)	**Ans: £370** $\bullet^1$ all frequencies correct $\bullet^2\bullet^3$ strategy $\bullet^4$ multiply and add correctly	$\bullet^1$ 15, 25, 20, 30, 25 $\bullet^2\bullet^3$ $(15\times1)+(25\times2)+(20\times3)+(30\times4)+(25\times5)$ $\bullet^4$ 370 **4R**

NOTES:

1. Minimum evidence required for award of first strategy mark:
   $15\times1,\ 25\times2,\ 20\times3,\ 30\times4,\ 25\times5$
   or
   addition of any **three** of 15, 50, 60, 120, 125

2. For an answer of 115 (15 + 25 + 20 + 30 + 25), with or without working award 1/4

Question No	Give 1 mark for each •	Illustrations of evidence for awarding each mark
14	**Ans: 528 grams** $\bullet^1$ interpret table $\bullet^2$ evidence that 1 kg = 1000 g $\bullet^3$ know how to calculate answer $\bullet^4$ correctly calculate answer (see note below)	 $\bullet^1$ 8.8 $\bullet^2$ 1 000 (g) or 6 000 (g) $\bullet^3$ $\frac{6000}{100} \times 8.8$ $\bullet^4$ 528 **4R**

NOTES:

1. For an answer of $5{\cdot}28 \times 10^n$, where n is an integer, $n \neq 2$, with or without working, award 3/4

2. The calculation mark may only be awarded for $8.8 \times 6 \times 10^n$, where n is an integer.

KU 26 marks
RE 29 marks

[END OF PAPER 2 MARKING INSTRUCTIONS]

FINAL TOTALS	**KU 40** **RE 40**