YEAR 7	MATHEMATICS	Marking Scheme

Aids for Marking of Scripts

Types of Marks

➢ **M**(ethod) marks are awarded for knowing a correct method of solution and attempting to apply it. Method marks cannot be lost for arithmetic mistakes. They can only be awarded if the method used would have led to the correct answer had not an arithmetic mistake been made. In general a correct method is implied by a correct answer and therefore **when a correct answer is given and no work is shown, no method marks are lost**.

➢ **A**(ccuracy) marks are given for correct answer only (c.a.o.) Incorrect answers, even though nearly correct, score no marks. Accuracy marks are also awarded for incorrect answers which are correctly followed through (f.t.) from an incorrect previous answer, **provided that f.t. is indicated in the mark scheme**. No method (M) or accuracy (A) marks are awarded when a wrong method leads to a correct answer.

➢ **B** marks are accuracy marks awarded for specific results or statements independent of the method used.

Misreading

M marks can still be earned (unless that part of the question is trivialized) but the final A marks are lost.

Crossed out working

An answer or working that is crossed out and not replaced is marked as if it were not crossed out. If the answer or working is replaced, then the crossed out answer or working is ignored and should not be considered for marking.

Units

In general, missing or inaccurate units are not penalised unless otherwise indicated in the mark scheme.

Other

➢ Incorrect working or statements following a correct answer are ignored.
➢ Marks are not sub-divisible; no half marks may be awarded.
➢ Other abbreviations used:
   o   o.e. (or equivalent)
   o   e.e.o.o. (each error or omission)
➢ Markers are advised to indicate the M, A or B marks awarded in the body of the script and then write their total in the margin. The total mark for each question should be written in the table included at the top of page 1 of the main paper. This measure facilitates the moderation of papers.

Non-Calculator Paper (25 marks)

Question		Requirements	Mark	Additional Guidance	Total
1	a	24, 24	B1	Both answers correct	9
		25	B1		
	b	$\frac{15}{100} = 0.15$	M1 A1		
	c	20	B1		
	d	24	B1		
	e	$\frac{6}{8} + \frac{1}{8} - \frac{4}{8} = \frac{3}{8}$	M1 A1		
	f	$\frac{4}{7}$	B1		
2	a	€1.48 + €3.60 = €5.08 €10 - €5.08 = €4.92	M1 M1 A1	Accept also 492c	5
	b	€2.88 ÷6 = €0.48	M1 A1	Accept also 48c	
3	a	2,500,000 – 89,900 = 2,410,100	M1 A1		3
	b	Two million, four hundred and ten thousand, one hundred	A1ft		
4		$78 \times 78 = 6084$	M1 A1		2
5	a	4,000,000,000	B1		6
		10,000	B1		
		2,500	B1		
		36,000	B1		
		125	B1		
	b	125, 2500, 10000, 36000, 4000000000	B1	Accept also the numbers as written originally in the question	

Main Paper (75 marks)

Quest.		Requirements	Mark	Additional Guidance	Total
1	a	4.6	B1		**5**
	b	150, 225	B1 B1		
	c	2.49, 2.58	B1 B1		
2		$384 \div 24 = 16$	M1 A1		**2**
3	a	0	B1		**4**
	b	$3 \times 5 = 15$	M1 A1		
	c	$\times$ 6 OR + 25 OR any valid rule	B1		
4	a	6, 8, 10, 12, 14 $50 \div 5 = 10$	B1 M1 A1 ft	B1 for 3 factors correct B2 for all factors correct	**8**
	b	1, 2, 4, 5, 10, 20 $20 - 1 = 19$	B2 A1 ft		
	c	12, 16, 20, 24, 28 20	B1 A1 ft		
5		Acute Whole turn Reflex Straight line	B1 B1 B1 B1		**4**
6	a	384	B1		**2**
	b	$\frac{17}{24}$	B1		
7		$\dfrac{480 + 42}{2} = 261$ $OR \ \dfrac{480 - 42}{2} = 219$ $219 + 42 = 261$	M1 M1 A1		**3**
8	a (i)	$a = 60°, \ b = 71°$	B1 B1	$\pm \, 2°$	**5**
	a (ii)	Scalene because all angles/sides are different	B1 B1		
	b	Draws an angle of 49° at B	B1	$\pm \, 2°$	

9	a	Any 2 of the following: 1, 2, 4, 8, 16, 23, 32, 46, 92, 184, 368, 736	B1	Both correct	**7**
	b	Any common multiple of 15 and 20	M1 A1	Give M mark if student shows that s/he understands the meaning of multiple	
	c	59	B1		
	d	$2^2 \times 3^2 \times 7$ Or 2 x 2 x 3 x 3 x 7	M1 M1 A1	Give M1 mark if students makes a valid attempt to find the prime factors Give M1 for all factors found	
10	a	They are parallel A valid reason.	B1 B1	Example: They are parallel since the angles marked 81° form corresponding angles.	**12**
	b (i)	a = 60° (angles in equilateral Δ) b = 60° (vertically opposite angles)	A1 M1 A1ft M1		
	b (ii)	c = 85° (alternate angles) d = 95° (angles on a line) e = 68° (angles in a quadrilateral)	A1 M1 A1 M1 A1 M1		
11	a	Shows understanding of tallying 3, 9, 11, 3, 4 Total = 30	M1 A2 B1	A1 – at least 2 correct A1 – remaining 3 correct	**9**
	b	4	A1 ft		
	c	12	A1 ft		
	d	$\dfrac{26}{30} = \dfrac{13}{15}$	A1 ft		
	e	No, from the frequency table alone it is not possible since the times are grouped.	B1 M1		
12	a	Draws pattern 4	B1	Both correct	**7**
	b	9, 16 25 36 100	B1 B1 B1 B1		
	c	square	B1		
	d	No, because 150 is not a square number	B1		
13	a	Plot A, B and C correctly Labelling	B1 each M1		**7**
	b	(−4, −3)	B1		
	c	Join diagonals (−1, 0)	M1 A1		