



Annual Examinations for Middle Schools 2024

YEAR 7	MATHEMATICS	MARKING SCHEME
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Types of Marks

Method 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. Unless otherwise stated, any valid method not specified in the marking scheme is to be accepted and marked accordingly.

There are two types of Method marks: **M** marks and **(M)** marks.

- **M marks** are only awarded if method is seen.
- **(M) marks** are awarded even when a correct answer is given, and no work is shown.

There are two types of Accuracy marks: **A** marks and **B** marks.

- **A** marks are accuracy marks 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 marking scheme.**
 - * No Method marks **M/(M)** or Accuracy marks **A** are awarded when a wrong method leads to a correct answer.
 - * When a question is assigned **M** and **A** marks and students present a correct answer without any working, only **A** marks are awarded.
- **B** marks are accuracy marks awarded for specific results or statements independent of the method used.

Misreading

Method marks can still be earned (unless that part of the question is trivialised) but the final Accuracy 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 marking scheme.

Other

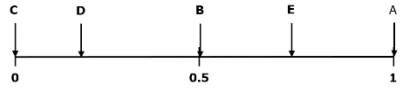
- Incorrect working or statement following a correct answer is ignored.
- Marks are not sub-divisible; no half marks may be awarded.
- Other abbreviations used:
 - o.e. (or equivalent)
 - e.e.o.o. (each error or omission)
- Markers are advised to indicate the M, (M), A or B marks awarded in the body 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 (20 marks)

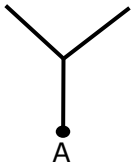
Questions 1-10 (1 mark each) and questions 11-15 (2 marks each)

Que.	Requirements	Mark		Additional Guidance
1	8	B1	1	
2	10 000	B1	1	
3	35.7	B1	1	
4	0.52	B1	1	
5	6.5	B1	1	
6	$\frac{1}{4}$	B1	1	
7	10	B1	1	
8	-10	B1	1	
9	9381 g	B1	1	
10	11	B1	1	
11	$\frac{1}{2} \times 12 = 6$ $6 \times 9 = 54$	(M)1 A1	2	
12	$5 \times 2 = 10$ $10 + 2 = 12$	(M)1 A1	2	
13	$27 - 16$ $= 11$	(M)1 A1	2	
14	$\frac{10}{15} + \frac{3}{15}$ $= \frac{13}{15}$	(M)1 A1	2	
15	$65 - 5 = 60$ $60 \div 3 = 20$	(M)1 A1	2	

MAIN PAPER (80 marks)

Que.	Requirements	Mark		Additional Guidance
1	a) Four hundred and nine thousand three hundred seventeen	B1	6	
	b) i) 2, 3 or 5 ii) 1, 4, 9 or 36 iii) 1, 2, 3, 5 or 15 iv) 1 or 27	B1 B1 B1 B1		
	c) >	B1		
2		B4	4	B1 for each correct mark Arrow D anywhere between C and B Arrow E anywhere between A and B

3	a)	$\frac{3}{5} = 60\%$ $0.7 = 70\%$ $\frac{17}{20} = 85\%$	B1 B1 B1	8	Converting into decimals									
	b)	1.2, 0.8, 0.93 $\frac{4}{5}, 0.93, 1\frac{1}{5}$	(M)1 A1											
	c)	attempt at cancelling $\frac{3}{4}$	(M)1 A1											
	d)	$2\frac{4}{5}$	B1											
4	a)	$12 \times 150 = \text{€}1800$ $\text{€}1800 + \text{€}500 = \text{€}2300$	M1 A1	6										
	b)	$\frac{8}{100} \times 1900 = \text{€}152$ $\text{€}1900 - \text{€}152 = \text{€}1748$	M1 A1											
	c)	$\text{€}2300 - \text{€}1748 = \text{€}552$	(M)1 A1 f.t.		f.t. from a) and b)									
5		<table><tr><td></td><td>Regular shapes</td><td>Irregular shapes</td></tr><tr><td>Less than 4 lines of symmetry</td><td>Equilateral Triangle</td><td>Rectangle Parallelogram</td></tr><tr><td>4 or more lines of symmetry</td><td>Square Regular nonagon</td><td></td></tr></table>		Regular shapes	Irregular shapes	Less than 4 lines of symmetry	Equilateral Triangle	Rectangle Parallelogram	4 or more lines of symmetry	Square Regular nonagon		B4	4	-1 e.e.o.o.
	Regular shapes	Irregular shapes												
Less than 4 lines of symmetry	Equilateral Triangle	Rectangle Parallelogram												
4 or more lines of symmetry	Square Regular nonagon													
6	a)	$68 \div 50$ $\text{€}1.36$	(M)1 A1	7	for division									
	b)	$5.5 \div 100 = 0.055 \text{ l per km}$ $0.055 \times 360 = 19.8 \text{ l}$	M1 M1 A1											
	c)	Yes She needs 39.6 l to travel both ways. She has enough and will have 10.4 l left	A1 M1		Examples: 19.8 l is less than half of 50 l for a valid reason									
7	a)	i) Pattern 4 correctly drawn (9 triangles)	B1	4										
		ii) 11 triangles	B1											
	b)	26, 37	B2		B1 for each correct entry									
8	a)	$s = 40^\circ$ Obtuse angle = 132° $t = 360^\circ - 132^\circ = 228^\circ$	A1 (M)1 A1	11	$(\pm 2^\circ)$ $(\pm 2^\circ)$									
	b)	$v = 62^\circ$ Base angles of isosceles triangle $w = 62^\circ$ Vertically opposite angles $x = 56^\circ$ Sum of angles in triangle $y = 62^\circ$ Alternate angles	A1 M1 A1 f.t. M1 A1 f.t. M1 A1 M1		f.t. from angle v f.t. from angle v									

9			B3	3	B1 for each correct segment
10	a)	$2x + 12y$	B2	6	B1 for each correct term
	b)	i) $2P + 6 = 20$ ii) $2P + 6 - 6 = 20 - 6$ $\frac{2P}{2} = \frac{14}{2}$ $P = 7$	B1 M1 M1 A1		M1 for subtracting 6 M1 for division
11	a)	$7.45 + 7.49 + 7.49 + 7.53 + 7.56 + 7.60$ $\frac{45.12}{6}$ $= €7.52$	(M)1 M1 A1	7	Award M1 for dividing by 6
	b)	$(7.49 + 7.53) \div 2$ $€7.51$	M1 A1		
	c)	$€7.49$	B1		
	d)	$€7.60 - €7.45 = €0.15$	A1		
12	a)	Monday 9:00 am	B1 B1	4	Accept Bathe the dog
	b)	Bathes the dog	B1		
	c)		B1		
13	a)	5	B1	4	
	b)	$60 + 30 + 40 + 5 = 135$ $150 - 135 = 15$	M1 A1		
	c)	Sailing column shaded till 15	B1		
14	a)	Correct plotting of coordinates	B3	6	B1 for every 2 correctly drawn points
	b)	Joining of points	M1		
	c)	Correct marking of point L	B1		
	b)	$(-3, -6)$	B1		