



INTERNATIONAL SECONDARY CERTIFICATE EXAMINATION
MAY 2025

QUANTITATIVE REASONING: PAPER I

MARKING GUIDELINES

Time: 3 hours

150 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

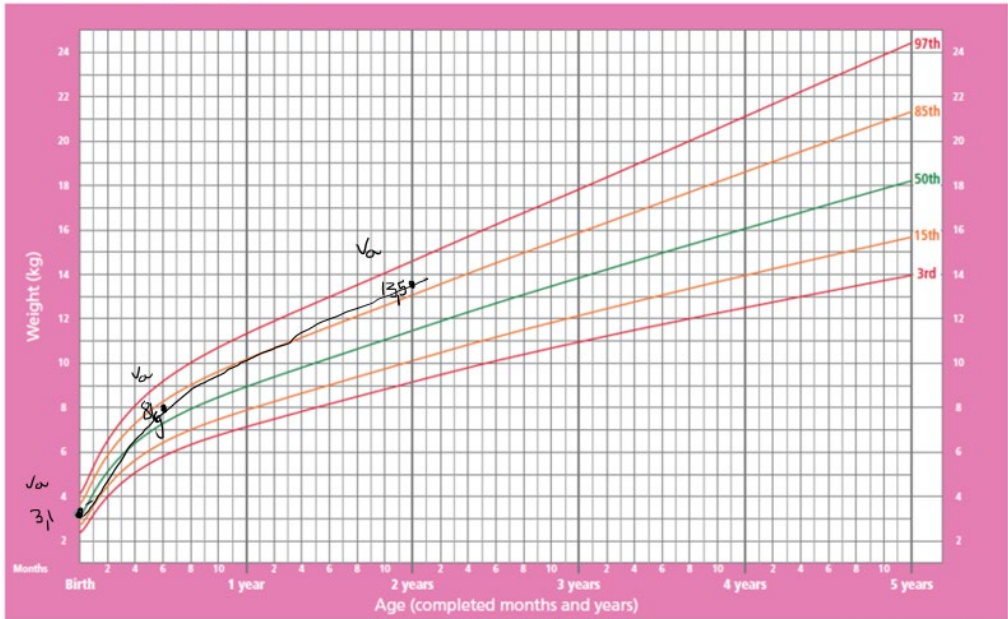
The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

Q1	Marking guideline		Marks
KEY	a accuracy m method mca method continued accuracy	ca continued accuracy ma method accuracy r rounding	
1.1.1	Norway		
1.1.2	3,12 million × 10/100 = 0,312 million OR 3 120 000 × 10/100 = 312 000 OR 3,12 million × 0,1 = 0,312 million		
1.1.3	3 120 000		
1.1.4	$\frac{312000}{15\,608\,386} \times 100 = 1,99 = 2\% \text{ r}$		
1.1.5	Sweden : UK = 60 : 24 (Order) = 5 : 2		
1.1.6	$82\% = \frac{41}{50}$		
1.1.7	R536 500 – R480 100 = R56 400		
1.2.1	(a) 102,355 + 15,353 = 117,708 OR 117,71 ZiG OR 102,355 × 1,15 = 117,708 (b) 409,43 × 0,15= 61,4145 OR 61,41 ZiG OR 470,845 – 409,43= 61,415 (c) 212 – (50 + 50 + 100) = 12 units OR 70,626 ÷ 5,885= 12 units (d) 70,626 + 10,594 = 81,22 ZiG OR 70,626 × 1,15 = 81,2199 ZiG (e) 802,20 – 65= 737,20 ZiG		
1.2.2	2.0471 × 50 = 102,355 ZiG per 308 km 102,355 ÷ 308 =0,33/km 117,70825 /308 = 0,382169 Zig/km		
1.3.1	Baristas, Groceries, Petrol, Water, bankfees, Transfers(any 2)		
1.3.2	Rent, Internet Any one		
1.3.3	271,2 ZiG ÷ 35,7= 7,60 ZiG per litre		

Q2	Marking guideline		Marks
KEY	a accuracy m method mca method continued accuracy	ca continued accuracy ma method accuracy r rounding	
2.1.1	R340 000 – R35 000= R305 000		
2.1.2	$6 \times 12 = 72$ months		
2.1.3	$R6\,203 \times 72 = R446\,616$		
2.1.4	$R446\,616 - R305\,000 = R141\,616$		
2.1.5	(a) $R18\,224,12 + R205,03 = R18\,429,15$ (b) $R12\,363,69 - R12\,226,15 = R137,54$ (c) $R12\,363,69 - R6\,203 = R\,6\,160,69$ (d) R6 230		
2.2.1	$R361\,420 - R340\,000 = R21\,420$ $\frac{21420}{340000} \times 100 = 6,3\%$		
2.2.2	YEAR 2 : $R361\,420 \times 1,07 = R386\,719,40$ YEAR 3 : $R386\,719,40 \times 1,07 = R413\,789,76$ YEAR 4: $R413\,789,76 \times 1,07 = R442\,755,04$		
2.3.1	$£51\,550 \times R22,98 = R1\,184\,619$		
2.3.2	$R1184619 \times 1,25 = R1\,480\,773,75 + R30\,000 = R1\,510\,773,75$		
2.3.3	$€53\,995 \times 0,18 = €9\,719,10$ $€9\,719,10 \times R19,19 = R186\,509,53^r$ (money)		

Q3	Marking guideline		Marks
KEY	a accuracy m method mca method continued accuracy	ca continued accuracy ma method accuracy r rounding	
3.1.1	Categorical		
3.1.2	0,3		
3.1.3	(a) $80+65+25+50= 220$ (b) $205 - (65 + 25 + 40)$ $205 - 130 = 75$ (c) Cape Town 205 Kruger Park 270 Wild Coast $(25 + 25 + 75 + 50= 175)$ (based on the answer for b) Conclusion: Wild Coast		
3.2.1	$950000 + 781000 + 420542 + 1222821 + 100000 + 550000 + 600000 + 350000 + 3000000 + 120000 = 8\ 094\ 363$ $\frac{8\ 094\ 363}{10} = 809\ 436$ visitors 'r		
3.2.2	100000; 120000; 350000; 420542; 550000 ; 600000 ; 781000; 950000; 1222821; 3000000 Median : Quirimbas Archipelagos and Sossusvlei		
3.2.3	$3\ 000\ 000 - 100\ 000 = 2\ 900\ 000$		
3.3.1	$11\ 050 \times 12 = 132600\text{N\$}$ $132600 - 100000 = 32600\text{N\$}$ $32600 \times 0,18 = 5868 \div 12 = 489\text{N\$}$		
3.3.2	$11050 - 2717 = 8333 \times 12 = 99\ 996\text{N\$}$ It is true as it is less than $100000\text{N\$}$ per year. Conclusion		

Q4	Marking guideline		Marks
KEY	a accuracy m method mca method continued accuracy	ca continued accuracy ma method accuracy r rounding	
4.1.1	$24,6 \times R3,40 = R83,64 \times 2 = R167,28 + R300 = R467,64$		
4.1.2	Call out fee: $10 \text{ km} \times R3,40 = R34,00 + R300 = R334$ Services = $R210 + (199 \times R145)$ = $R210 + R28\,855$ = $R29\,065 + R334$ = $R29\,399$		
4.1.3	A quotation is just getting the value you <i>will have to pay</i> if you buy an item or agree on the service where an invoice is indicating what you have to pay for the items bought or service received.		
4.1.4	$R516,80 \div 1,15 = R449,39$ $R516,80 - R449,39 = R67,41$ OR $516,80 \times 15 \div 115 = R67,41$		
4.2.1	Admin – Office material + Telephone $R1\,990 - (420 + R520)$ = $R1\,050$		
4.2.2	Total Budget = $R36\,800 + R8\,400 + R5\,000 + R1\,990$ = $R52\,190$ $\frac{36800}{52190} \times 100 = 70,5\%$		
4.2.3	It is good method to display a 100% OR Display a part of a whole		
4.2.4	$\frac{1990}{52190} \times 360 = 13,726 = 14^\circ \text{ (from 4.2.2)}$ OR $\frac{1990}{52190} \times 100 = 3,813\% \times 360 = 13,727^\circ = 14^\circ$		
4.2.5	Operating Expenses: For every aircon they service, they will use cleaning material or other products that will cost some extra money. Admin costs		
4.2.6	Double bar graph as you will have the two businesses information next to each other.		

Q5	Marking guideline		Marks
KEY	a accuracy m method mca method continued accuracy	ca continued accuracy ma method accuracy r rounding	
5.1.1	$1/20 \times 100 = 5\%$		
5.1.2	$39 \text{ million} \times 100 \div 5 = 780 \text{ million children}$		
5.1.3	Weight-for-age GIRLS Birth to 5 years (percentiles) NAME: <i>Mary Lee Summers</i>  WHO Child Growth Standards <i>V6 pair data</i>		
5.1.4	15 th percentile		
5.1.5	90% of other babies are bigger and 10% are smaller.		
5.2.1	September (Will except also October)		
5.2.2	September as you will get more metical per rand.		
5.2.3	Increase the spaces in the Y-axis		
5.2.4	$R2000 \times 0,018 = R36$ Therefore R43,11 will be charged. $R2043,11 \times 3,5 = 7150,89 \text{ MZN metical} = 7151 \text{ MZN metical}$ OR $R2000 \times 3,5 = R7\ 000 \times 0,018 = 126 \text{ MZN}$ $43,11 \times 3,5 = 150,885$ Therefore 150,89 will be charged $7\ 000 + 150,89 = 7150,89 \text{ MZN} = 7151 \text{ MZN}^r$		

Total: 150 marks