



EXAMINATIONS COUNCIL OF ZAMBIA

2022 PRIMARY SCHOOL (GRADE 7 COMPOSITE) LEAVING EXAMINATION GENERAL PERFORMANCE ANALYSIS REPORT

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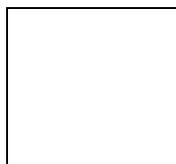
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Foreword



The Examinations Council of Zambia under its mandate has over years conducted assessments at Primary (G7), Junior Secondary (G9), School Certificate (G12) and Teacher Education levels. These assessments have provided useful information on learning achievement, valuable to teaching and learning, system improvement and policy formulation. It is for this reason that the Examinations Council of Zambia yearly evaluates the performance of candidates in examinations at various levels of learning, to provide feedback to the general public and key stakeholders in education sector. The 2022 Grade Seven Composite Examination Annual Examination Performance Review Report is presented in two chapters. The first chapter highlights examinations statics on candidature absenteeism and general performance while Chapter two provides an analysis of items in terms of content and cognitive domains and highlights challenges and suggestions for improvement. It is hoped that stakeholders at both Policy making and implementation and, the general citizenry will find this report useful in quest for continuous improvement in teaching and learning and the education sector as a whole.

Dr. Michael Chilala

Executive Director

Examination Council of Zambia

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1.0 Introduction

This report presents the general performance of candidates in the 2022 Grades 7 Composite Examination. The report provides statistical information on overall national and regional performance by division classifications and grade distributions. Performance is also analysed by mean scores and sex, subjects and school types.

1.1 Overview of the 2022 Grade 7 Composite Examinations

- 1.1.1 The 2022 Grade seven (7) cohort was the seventh to sit for the examinations from the time the curriculum was revised in 2014.
- 1.1.2 The Composite examination was written from Monday 31st October to Thursday 3rd November, 2022. The grade seven examinations were announced on 31st December 2022.
- 1.1.3 The Grade 7 Composite Examination is based on six learning areas and two aptitude tests. The six learning areas are English, Mathematics, Social Studies, Integrated Science, Creative and Technology Studies and Zambian Languages while the two aptitude tests are Special Paper 1 (Verbal Reasoning) and Special Paper 2 (Non-verbal Reasoning).

1.2 Candidature

- 1.2.1 493,823 candidates entered for the 2022 Grade 7 Composite Examination. Of these, 493,618 were from the Zambian schools and 205 from St. Jeff College in Johannesburg, South Africa. Generally, candidature increased by 7.92 percent from 2021 (457, 590). The number of boys who entered for the examination was 238,051 (48.21%) while that of girls was 255,772 (51.79%). Candidature by sex increased by 0.14 percentage points for boys and decreased by the same margin for girls from 2021.

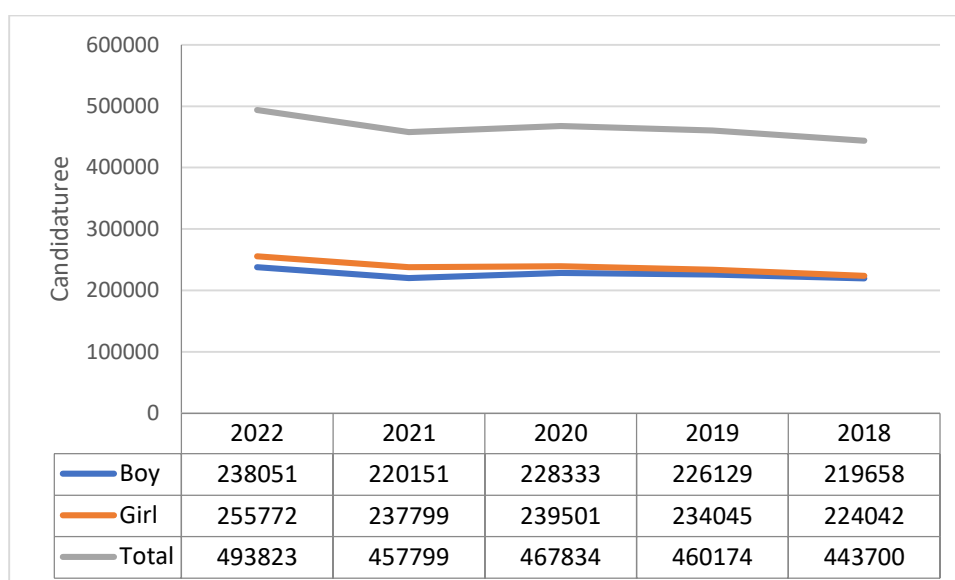


Figure 1: Grade 7 candidature for the years 2018, 2019, 2020, 2021 and 2022

1.3 Absenteeism

- 1.3.1 Generally, absenteeism from the examination decreased from 10.59 percent (48,509 candidates) in 2021 to 8.99 percent in 2022. Of the 44,393 candidates who were absent from the 2022 Grade 7 Composite Examination, 21,757 (9.14%) were boys while 22,636 (8.85%) were girls.
- 1.3.2 The proportions of both boys and girls who were absent from the examinations decreased during the 2022 examinations. For girls it reduced from 10.31 percent in 2021 to 8.85 percent in 2022 while that of boys reduced from 10.90 percent in 2021 to 9.14 percent in 2022.
- 1.3.3 North-Western Province had the largest proportion of absenteeism at 13.62 percent followed by western Province at 11.61 percent and Central at 11.46 percent. Southern Province recorded the lowest proportion of absenteeism at 6.29 percent.
- 1.3.4 From 2021 the number of boys and girls that were absent from the examination has been dropping compared to the trend from 2018 to 2020.

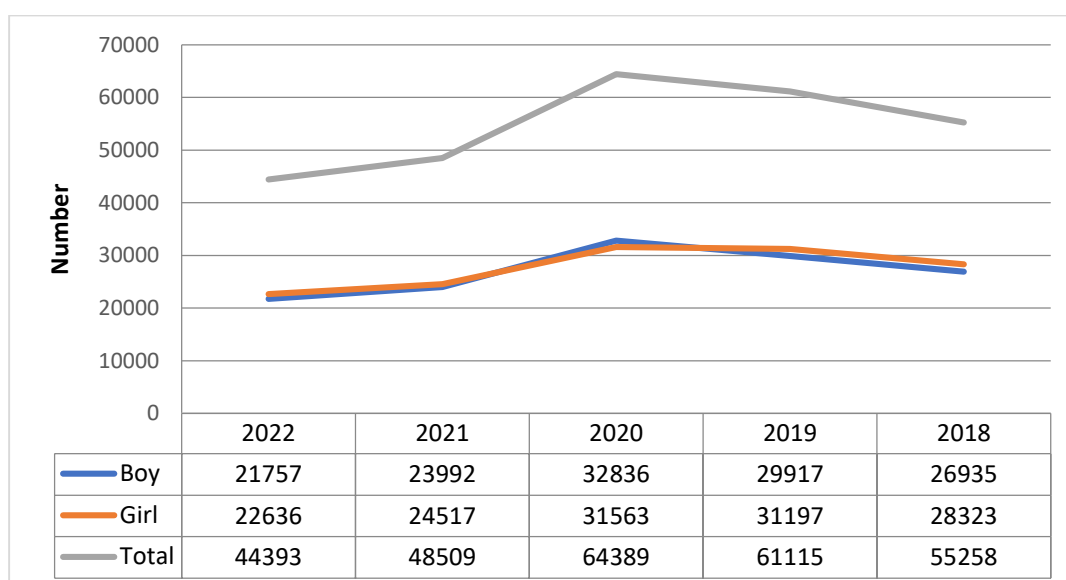


Figure 2: Number of Grade 7 candidates absent from the Examination (2018 to 2022)

2.0 General Performance

2.1 Certificate Awards

- 2.1.1 The Grade 7 Composite Examination scores are standardized so that each learning area (subject) has a minimum score of 50 and a maximum of 150. The total score after standardization for the best four learning areas plus the two aptitude tests, making six, is 900.
- 2.1.2 The certification awards for the examination are categorized in four divisions namely, division 1 (distinction), division 2 (merit), division 3 (credit) and division 4 (pass). Learners with a pass show possession of basic competencies while those with credit and merit demonstrate desirable competencies. The ones at distinction demonstrate possession of outstanding competencies.
- 2.1.3 Certificate classification is based on any best four out of six core subjects. To obtain Division 1, a candidate must obtain 460 standard points and above in the best 4 subjects, excluding the aptitude tests (Special Paper I and Special Paper II). To obtain division 2 and 3 candidates must score between 422 and 459 standard points and 398 and 421 standard points respectively. For Division 4, the standard points are 397 and below (Refer to table below). A learner may score very high in the six learning areas including the aptitude (Intelligence) tests but get a lower certification

division as the scores in the two intelligence tests are excluded in certification.

Table 1: Grade 7 Division Cut Scores

Division	Score
Division One (1)	460 and above
Division Two (2)	422 – 459
Division Three (3)	398 – 421
Division Four (4)	397 and below

- 2.1.4 The 2022 Grade 7 performance according to division classifications was as follows. Similar to 2021, 2020 and 2019, more candidates (37.30 %) in 2022, fell in the division four (4) category. The 2022 division 4 proportions however, represented an increase of 0.29 percentage points from 2021 and, the lowest recorded in 3 years.
- 2.1.5 The 2022 division one (1) category recorded the lowest proportions at 14.24 percent, followed by division three (3) at 21.43 percent and division two (2) at 27.03 percent. This represented a decrease of 4.04 percentage points for division 1 proportions in 2022 from 2021 and, increases in division 2 (0.86) and 3 (3.48) categories proportions
- 2.1.6 By gender, girls performed better than boys in all the divisions. This has been the case for the past three years (2021, 2020 and 2019). This status quo may call for probing. (See table below).

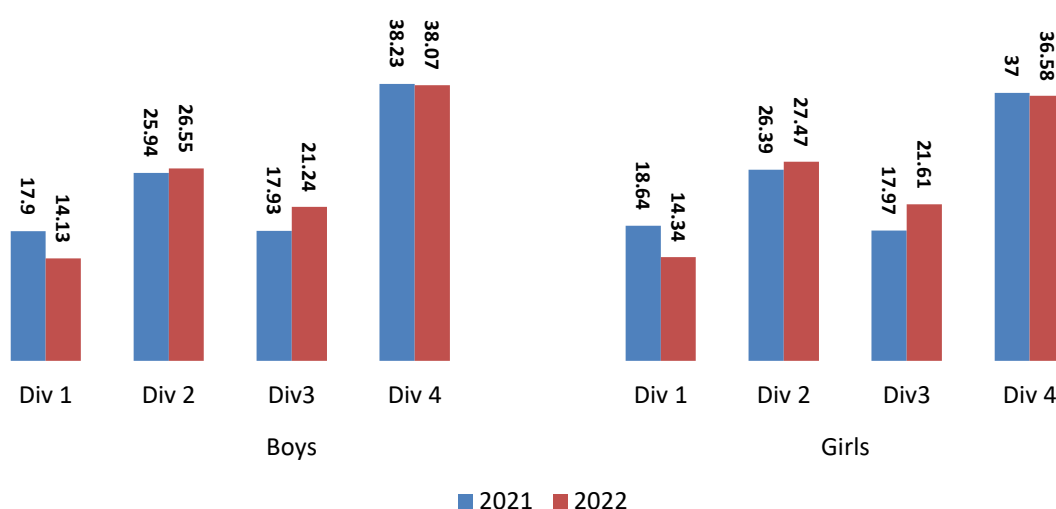


Figure 3: 2021 and 2022 Grade 7 Composite Examination Certificate Awards by Sex

Table 2: Grade 7 Performance According to Division and Gender for, 2020, 2021 and 2022

Certificate	2022			2021			2020		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Division One	3056 3	3343 7	64000	3510 7	3975 8	74865	3462 2	3760 7	72229
(Percent)	14.13	14.34	14.24	17.9	18.64	18.28	17.72	18.09	17.91
Division Two	5743 1	6403 2	12146 3	5087 7	5629 0	10716 7	4901 1	5390 3	10291 4
(Percent)	26.55	27.47	27.03	25.94	26.39	26.17	25.08	25.93	25.52
Division Three	4595 1	5038 0	96331	3517 5	3832 9	73504	3474 2	3753 7	72279
(Percent)	21.24	21.61	21.43	17.93	17.97	17.95	17.78	18.06	17.92
Division Four	8234 9	8528 7	16763 6	7500 0	7890 5	15390 5	7586 6	7908 1	15494 7
(Percent)	38.07	36.58	37.30	38.23	37	37.59	38.69	39	38.85

2.2 Performance in Core Subjects by Mean Standard Scores

- 2.2.1 The subjects in this analysis include: English Language, Social Studies, Mathematics, Integrated Science, Zambian Languages and, Creative and Technology Studies. The scores were standardised into a common measurement scale with the distribution ranging from 50 to 150 marks, so that they can be compared.
- 2.2.2 The mean scores ranged from 99.88 percent in Zambian Languages to 100.11 percent in Social Studies.
- 2.2.3 In 2022, the mean scores marginally increased by an average of 0.99 marks across all the subjects.

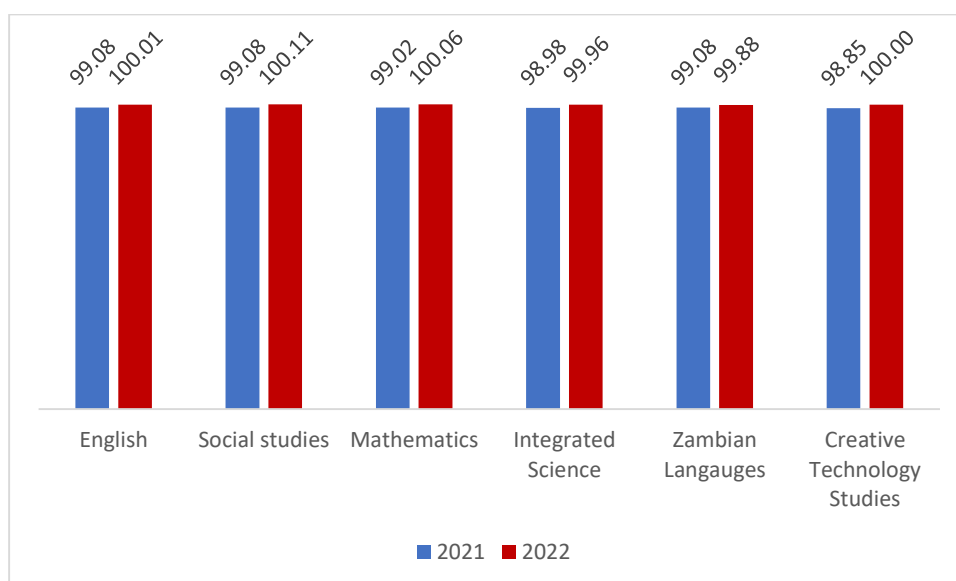


Figure 4: 2022 Core Subjects Mean Standard Scores

2.3 Performance by Mean Scores and Sex

- 2.2.4 Similar to 2021, the analysis of mean standard scores by gender revealed that girls performed better than boys in all subjects except Mathematics. However, the difference was very minimal (0.31marks).
- 2.2.5 A wider margin was observed in English Language where girls' mean standard score was higher than that of boys by 1.22 marks. However, the difference was smaller compared to 2021.
- 2.2.6 Generally, the figures clearly show that there is little difference between the performance of girls and boys in all the subjects.

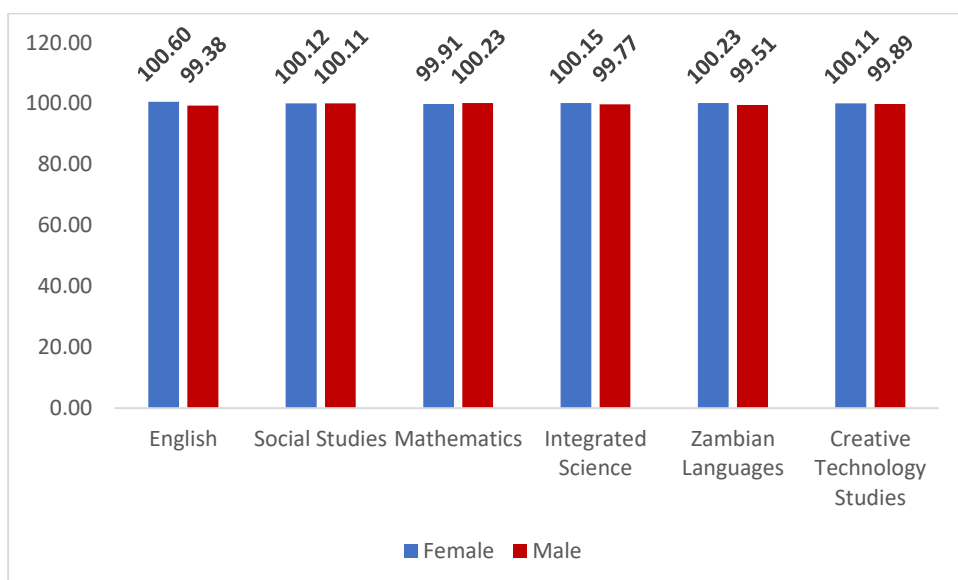


Figure 5: 2022 Mean Standard Scores by Gender

2.4 Performance by Sex in the Special Papers

2.2.7 The analysis by sex revealed that girls performed better than boys in Special Paper 1 by 0.17 marks while boys performed better than girls in Special Paper 2 by 3.16 marks.

2.2.8 The overall mean scores for the two papers were almost the same, 99.06 marks in Special Paper 1 and 99.07 marks in Special Paper 2.

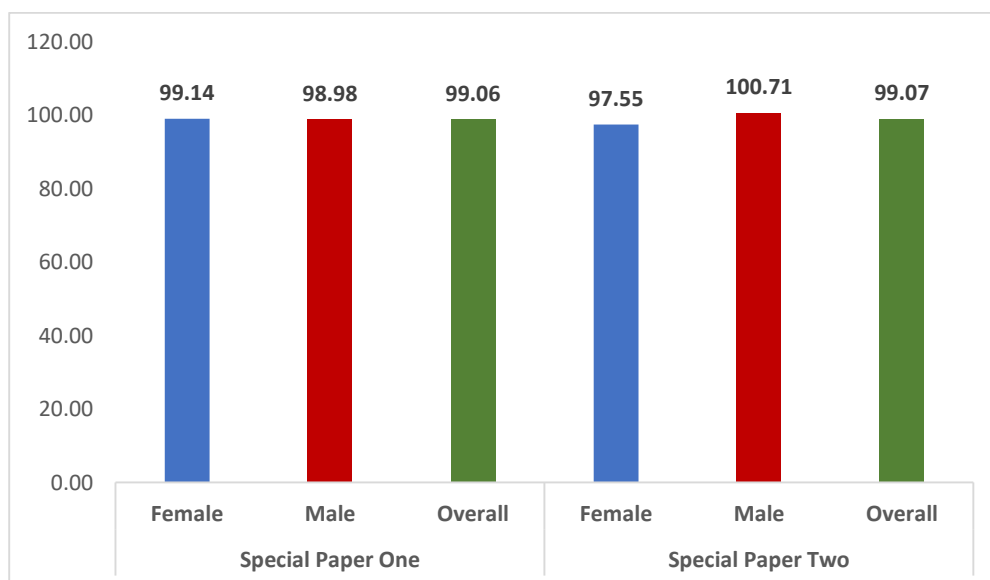


Figure 6: 2022 Mean Performances by Sex in Special Papers

2.5 Overall Performance According to Divisions at National Level

2.2.9 The 2022 Grade 7 performance according to division classifications was as follows. Similar to 2021, 2020 and 2019, more candidates (37.30 %) in 2022, fell in the division four (4) category.

2.2.10 The 2022 division 4 proportions however, represented an improvement of 0.29 percentage points from 2021 and, the lowest recorded in 3 years.

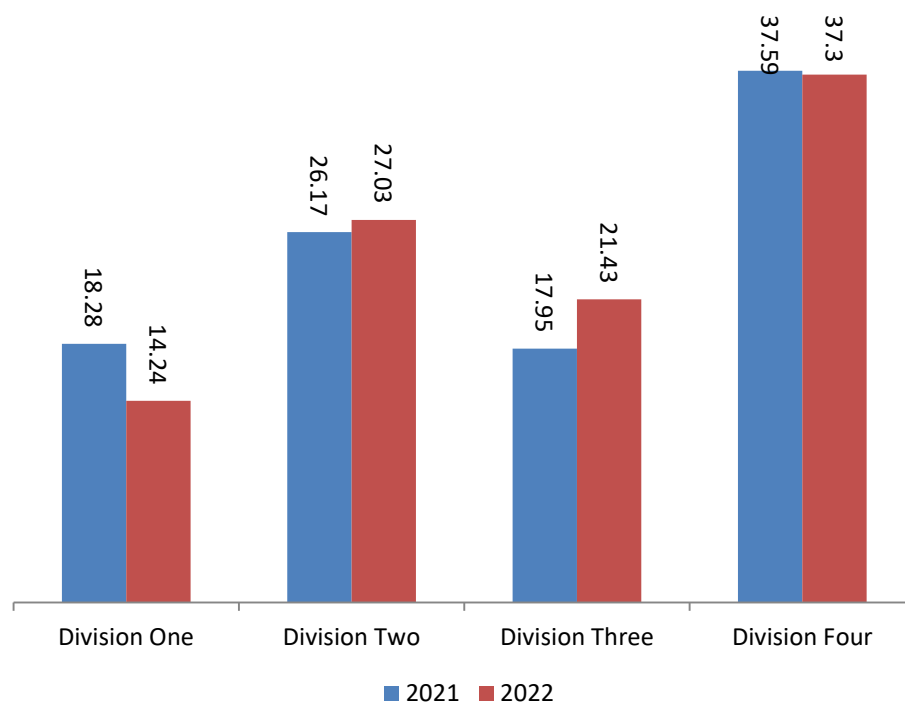


Figure 7: Division classification at National Level (2021 & 2022)

2.6 Overall Performance According to Divisions by Region

2.2.11 Overall, Lusaka (22.93%) and Copperbelt (21.26%) Provinces had the highest proportion of the candidates obtaining division one. This was followed by Muchinga Province at 14.79 percent.

2.2.12 The least proportion of candidates obtaining division one was recorded in Western province at 7.61 percent.

2.2.13 Copperbelt province (31.07%) had the highest proportion of candidates that obtained division two whilst Luapula Province (25.04%) had the highest proportion for division 3.

2.2.14 The highest proportion of candidates obtaining division 4 was recorded in Central at 48.68 percent, followed by Southern at 44.61 percent. The highest division 4 proportions in 2021 were recorded in Eastern at 55.91percent. It can be observed that, the 2022 regional-wise highest division 4 proportions decreased by 7.23 percentage points. Concerted efforts put in place to

improve learners' performance beyond basic competence levels, need to be strengthened if the continued decrease in division 4 proportions at national and regional levels is to be sustained.

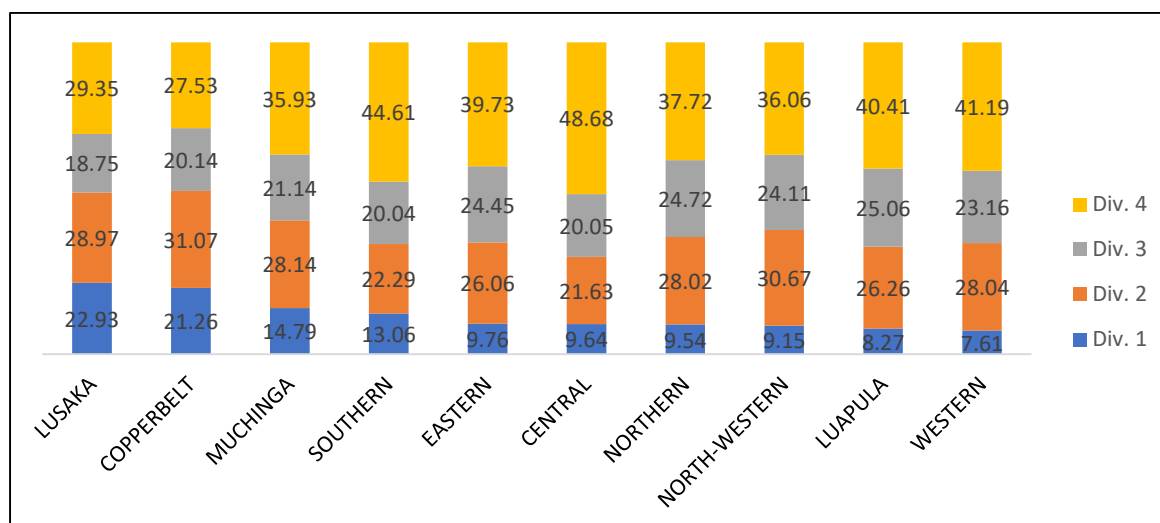


Figure 8: 2022 Proportion of Grade Distributions by Region

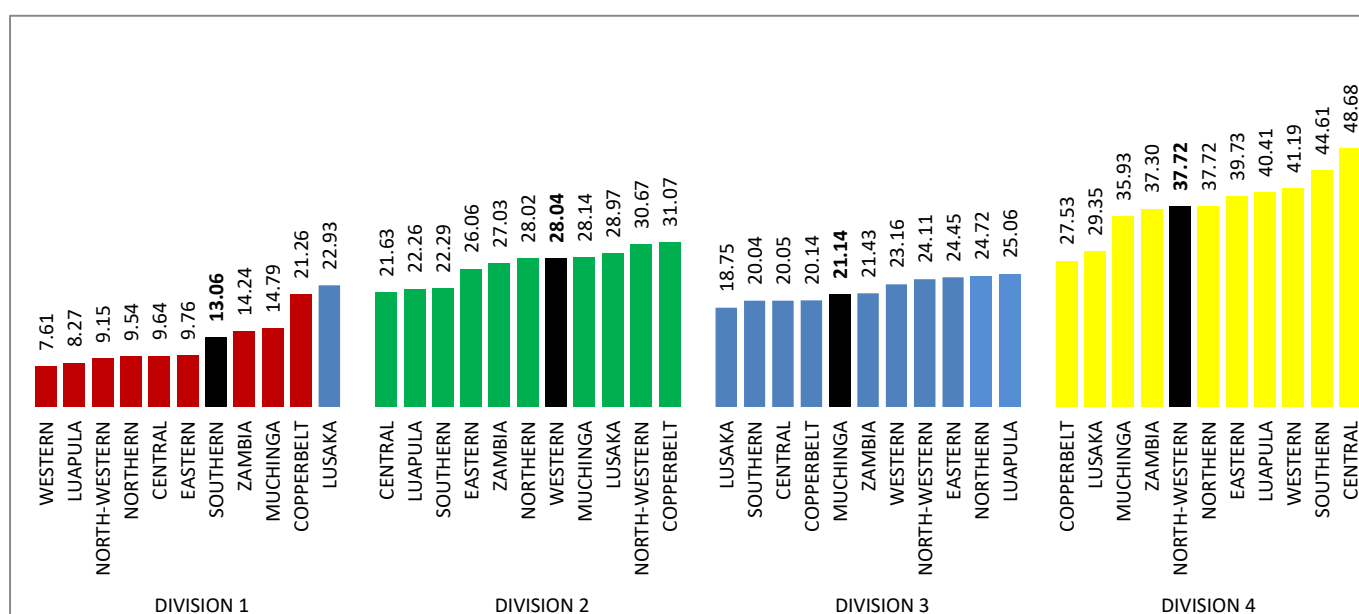


Figure 9: 2022 Proportion of Grade Distributions by Region

2.7 Grade Distribution by Subject at National Level

2.2.15 In the division one category Special Paper One recorded the highest score at **12.95** percent followed by Special Paper Two at **12.60** percent. The lowest was Social studies at **10.68**

2.2.16 In division two categories Zambian Languages (averaged) was highest at **24** percent followed by Mathematics at **23.27** percent.

2.2.17 Special paper one had the highest proportion of candidates obtaining division four at **51.42** percent.

2.2.18 All subjects had higher proportions of candidates obtaining division four than divisions three, two and one.

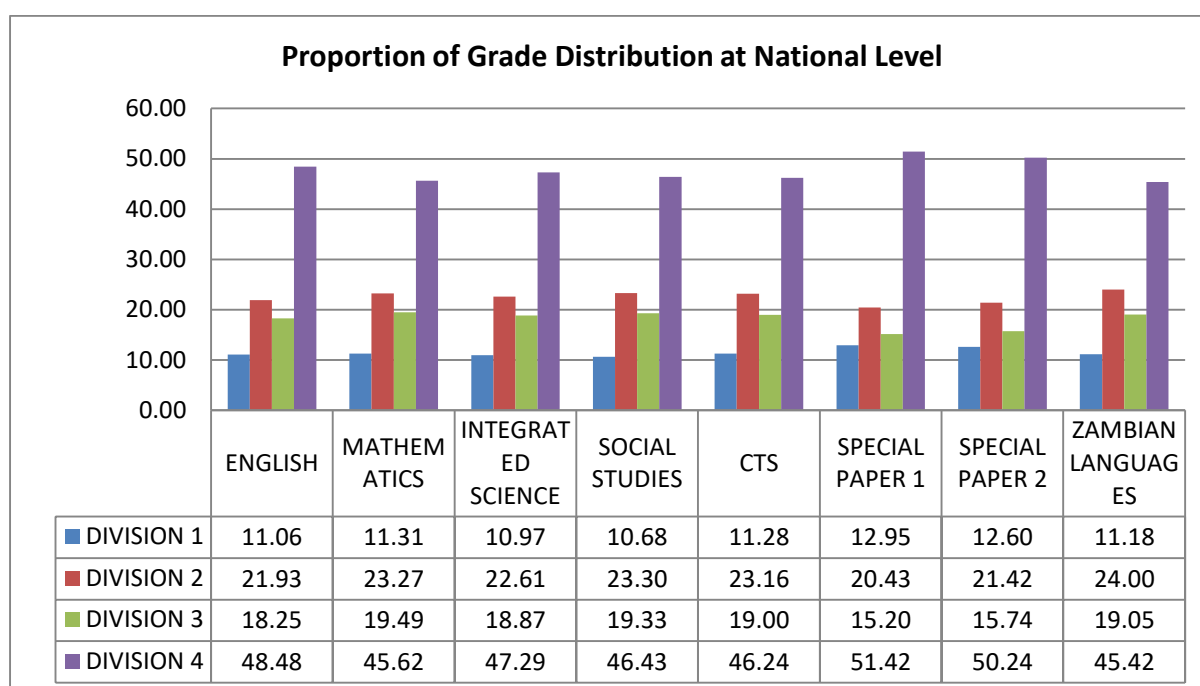


Figure 10: Proportion of Grade Distribution by Subject at National Level

2.8 Grade Distribution by Subject by Region

2.2.19 English Language

2.2.19.1 Lusaka Province had the highest proportion of candidates obtaining division one at 25.98 similar as 2021 when it was highest at 27.75percent.

2.2.19.2 Eastern Province had the least proportion of candidates obtaining division one at 5.62 similar to 2021 where it was least at 6.87 percent.

2.2.19.3 Eastern province recorded the highest proportion of candidates obtaining division four at 58.08 percent.

2.2.19.4 The highest proportion of candidates obtaining division two was recorded in Copperbelt Province at 29.07 percent.

2.2.19.5 Similar to 2021 and 2020, there were more candidates that obtained division four in English Language across all regions.

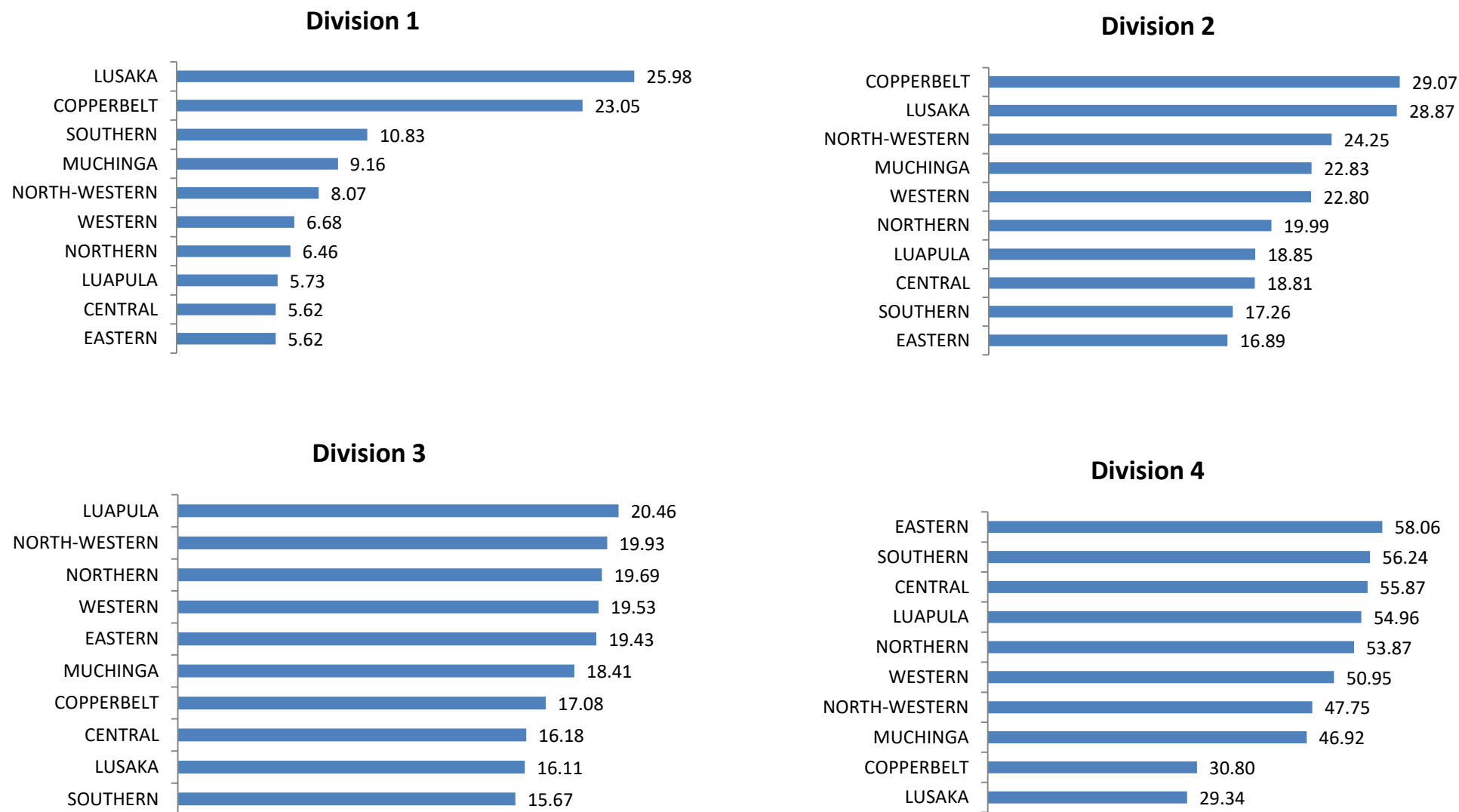


Figure 11: 2022 English Language Grade Distributions by Region

2.2.20 Mathematics

- 2.2.20.1 Lusaka Province had the highest proportion of candidates obtaining division one at 19.76 percent. In 2021 North-western was highest at 27.62 percent.
- 2.2.20.2 The provinces with the least proportion of candidates obtaining division one in Mathematics was Western Province at **6.80** percent.
- 2.2.20.3 Copperbelt Province had the highest proportion of candidates obtaining division two in Mathematics at 18.60 percent while in 2020 Western Province was highest in this category at **31.15** percent.
- 2.2.20.4 Central Province had the highest proportion of candidates obtaining division four at **54.63** percent.
- 2.2.20.5 There were more candidates that obtained division four across all regions in Mathematics.

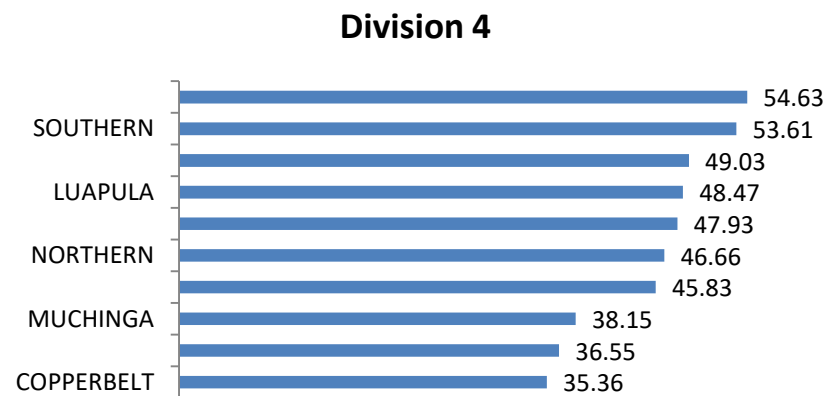
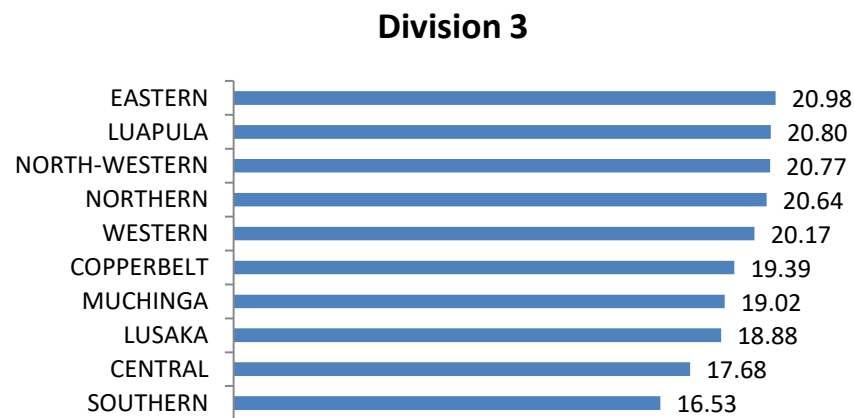
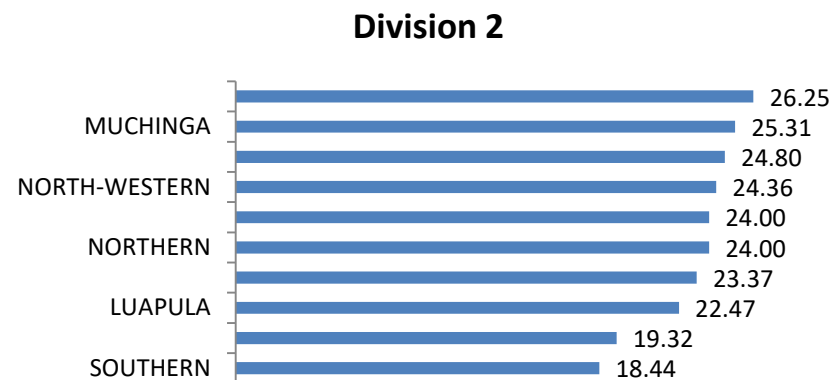
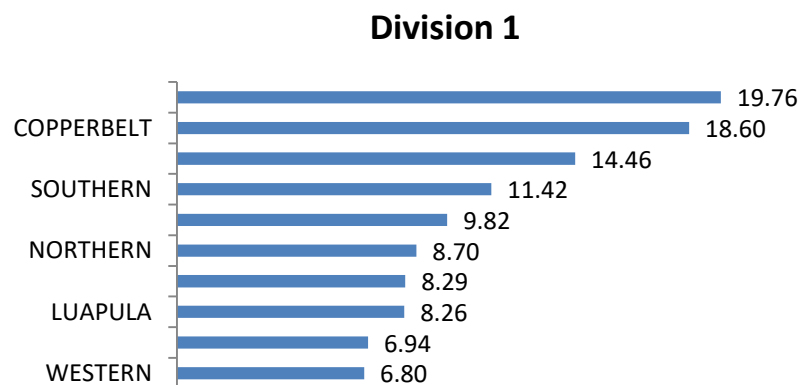
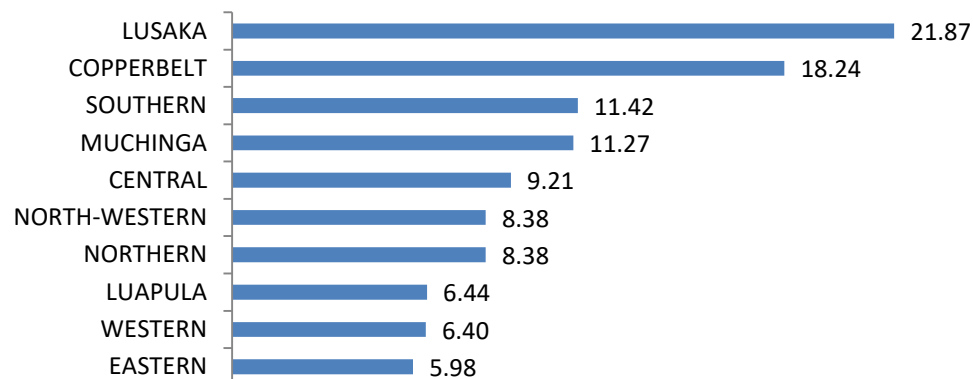


Figure 12: 2022 Mathematics Grade Distributions by Region

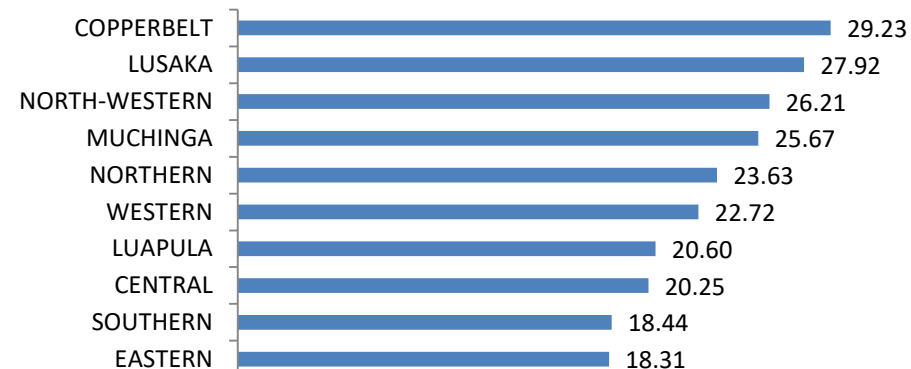
2.2.21 Social Studies

- 2.2.21.1 Lusaka Province had the highest proportion of candidates obtaining division one at 21.87 percent taking over from Western which had the highest proportion in 2021 at 22.59. Copperbelt Province was second in the proportion of candidates obtaining division one at 18.24 and was also highest in the division two category at 29.23 percent.
- 2.2.21.2 Eastern Province had the least proportion of candidates obtaining division one at 5.98 percent just as last year when it recorded 5.81 percent.
- 2.2.21.3 Eastern province had the highest proportion of candidates obtaining division four at 55.91 percent similar to 2021 at 68.54 percent.
- 2.2.21.4 There were also more candidates that obtained division four than division two and three across all regions in Social Studies.

Division 1



Division 2



Division 3



Division 4

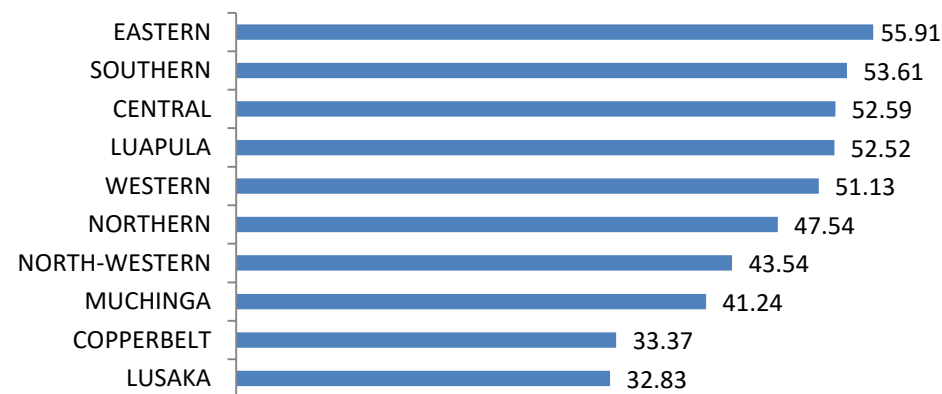


Figure 13: 2022 Social Studies Grade Distributions by Region

2.2.22 Integrated Science

- 2.2.22.1 Copperbelt had the highest proportion of candidates obtaining division one at 29.11 percent. The second highest Province was Lusaka at 21.50 percent moving from highest in 2021.
- 2.2.22.2 Western Province had the least proportion of candidates obtaining division one at 6.49 percent followed by Luapula province at 20.88 percent.
- 2.2.22.3 Southern Province had the highest proportion of candidates obtaining division four at 55.41 percent taking over from Eastern Province which was highest in 2021 at 62.04 percent.
- 2.2.22.4 There were also more candidates that obtained division four than division three and two across all regions in Integrated Science.

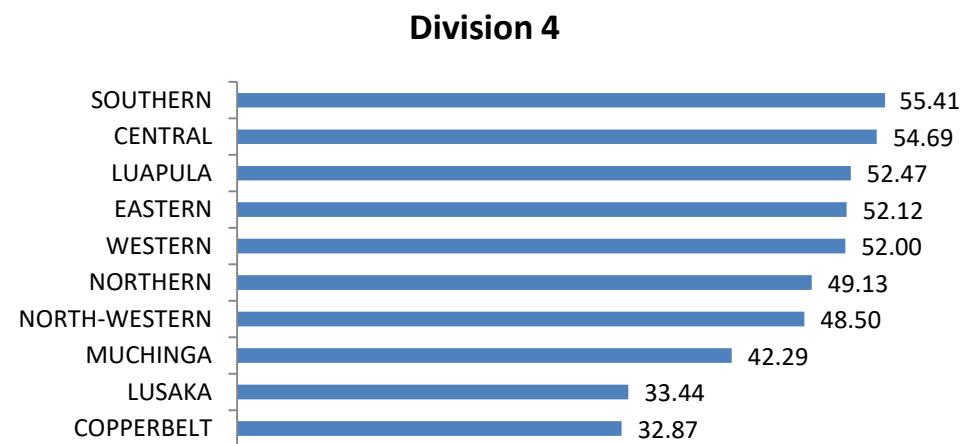
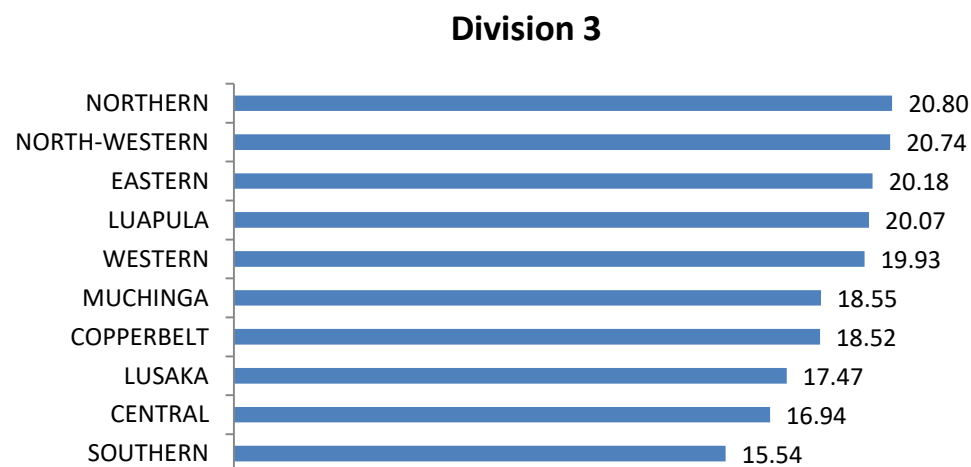
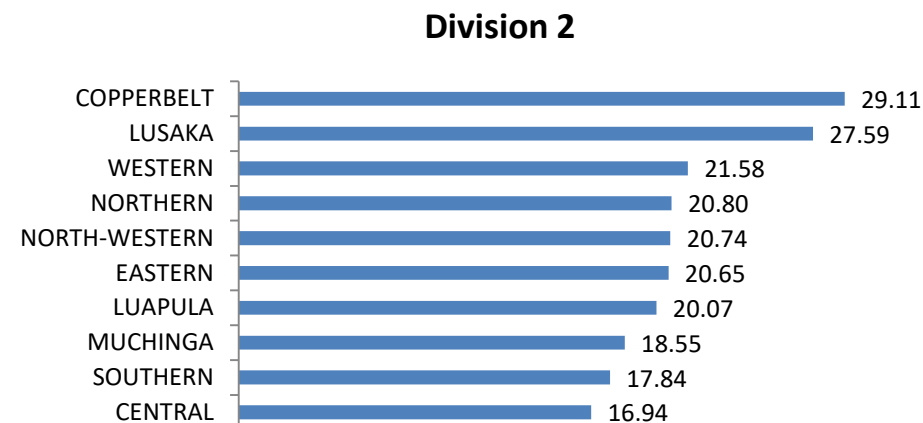
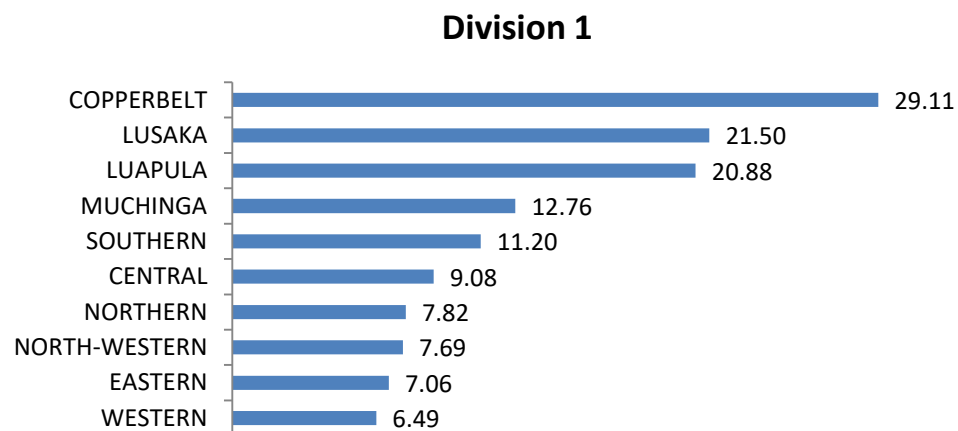


Figure 14: 2022 Integrated Science Grade Distributions by Region

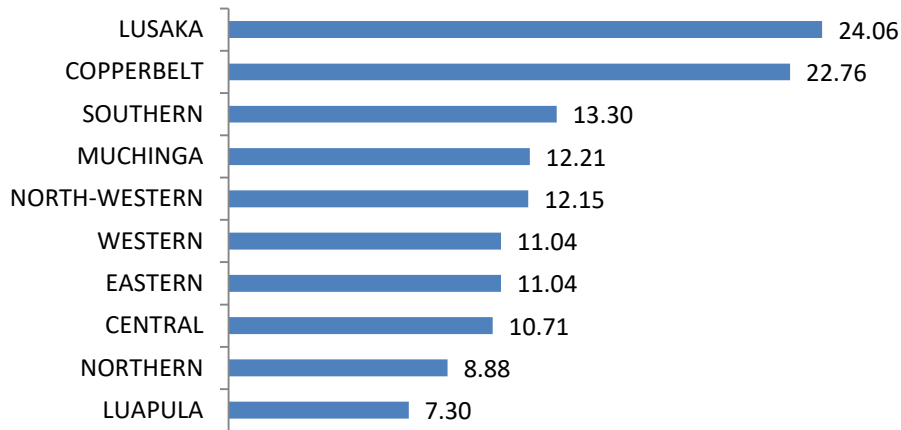
2.2.23 Special Paper One

2.2.23.1 Just as in 2020 and 2021 Lusaka province had the highest proportion of candidates obtaining division one at 24.06 percent in 2022 while Southern Province recorded the highest proportion of candidates obtaining division two at 17.36 percent.

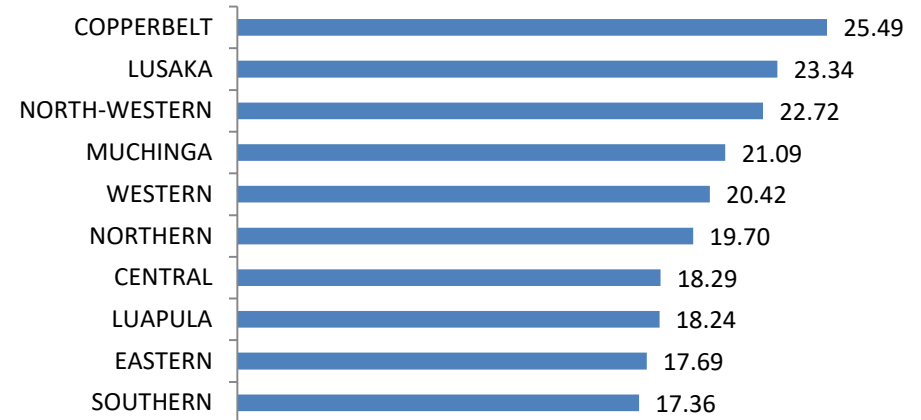
2.2.23.2 At division three, Eastern province had the highest proportion at 17.15 percent while Luapula had the highest proportion of candidates obtaining division 4 at 58.85 percent.

2.2.23.3 There were also more candidates that obtained division four across all regions in Integrated Science

Division 1



Division 2



Division 3



Division 4

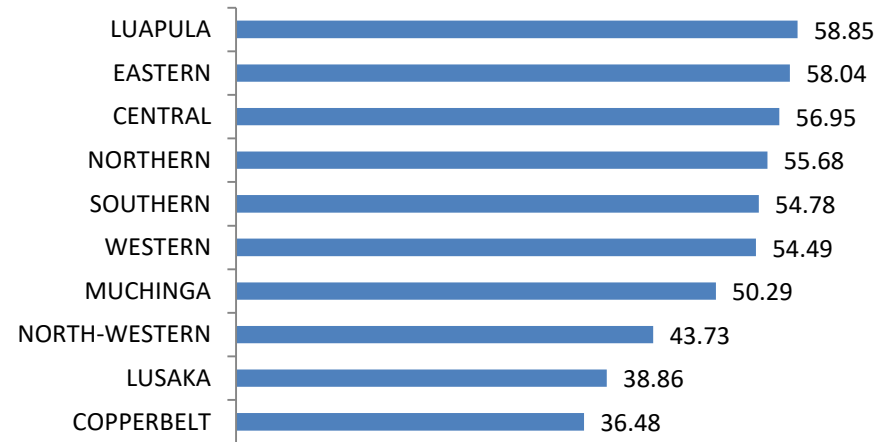


Figure 15: 2022 Special Paper One Grade Distributions by Region

2.2.24 Special Paper Two

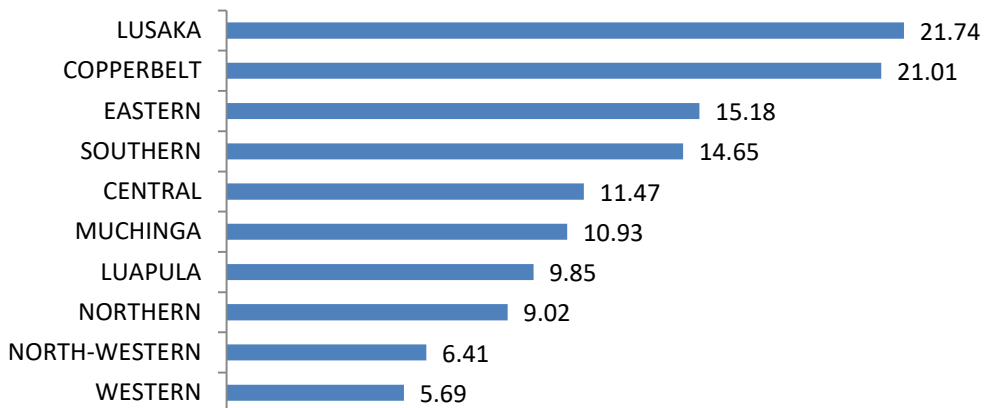
2.2.24.1 As observed in Special Paper one Lusaka province had the highest proportion of candidates obtaining division one at 27.89 percent Copperbelt was second at 21.01 percent.

2.2.24.2 In the division two category Lusaka was highest again at 27.89 percent followed by Copperbelt at 27.79 percent.

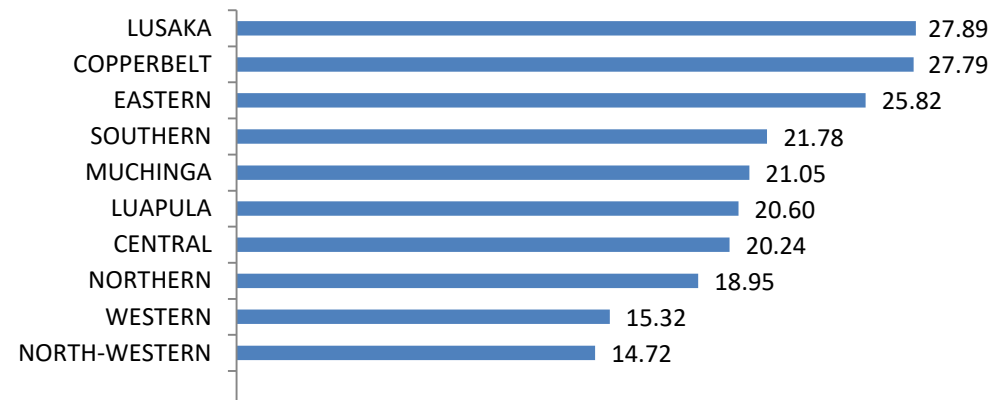
2.2.24.3 At division three, Eastern Province had the highest proportion at 17.60 percent.

2.2.24.4 Western Province had the highest proportion of candidates obtaining division four at 66.15 percent.

Division 1



Division 2



Division 3



Division 4

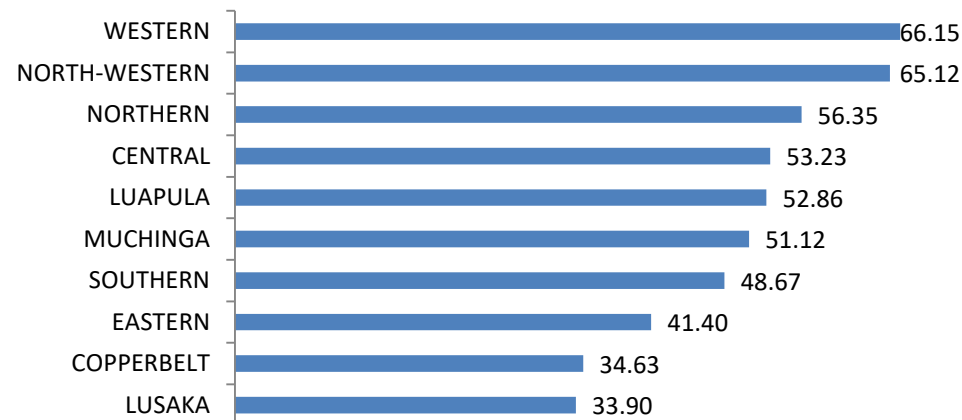


Figure 16: 2022 Special Paper Two Grade Distributions by Region

2.2.26 Creative Technology Studies

2.2.26.1 Lusaka province had the highest proportion of candidates obtaining division one at 25.99 percent taking over from Western Province which was highest at 28.22 percent in 2021.

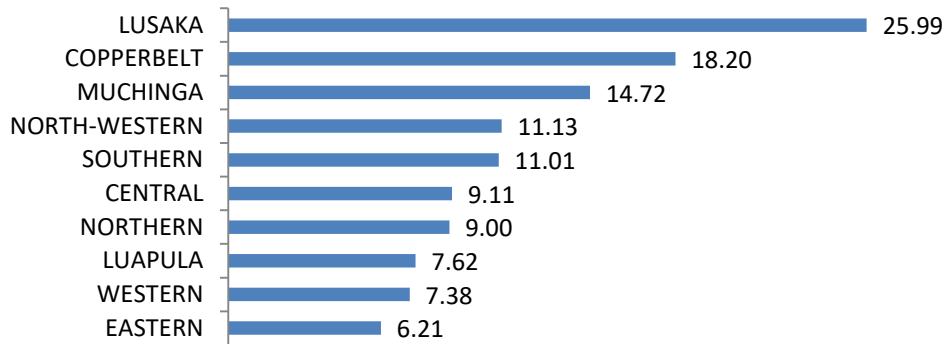
2.2.26.2 North-western Province was second at 22.26 percent.

2.2.26.3 Similar to 2021 and 2020, Eastern province had the least proportion of candidates obtaining division one at 6.21 percent.

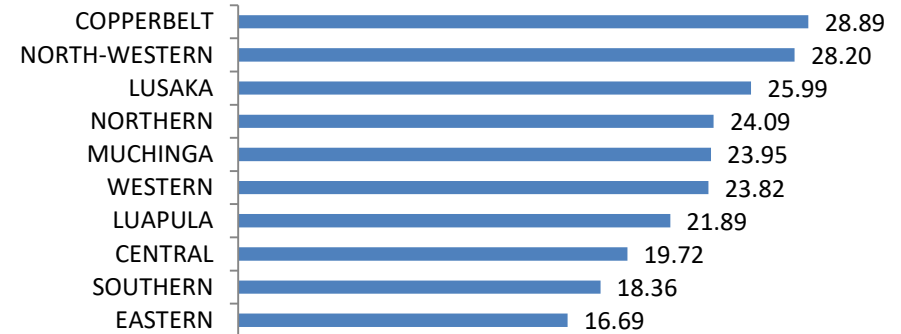
2.2.26.4 Copperbelt province had the highest proportion of candidates that obtained division two at 28.89 followed by North-western at 28.20 percent while Eastern was least at 16.69 percent.

2.2.26.5 Eastern Province had the highest proportion of candidates obtaining division four at 58.15 percent.

Division 1



Division 2



Division 3



Division 4

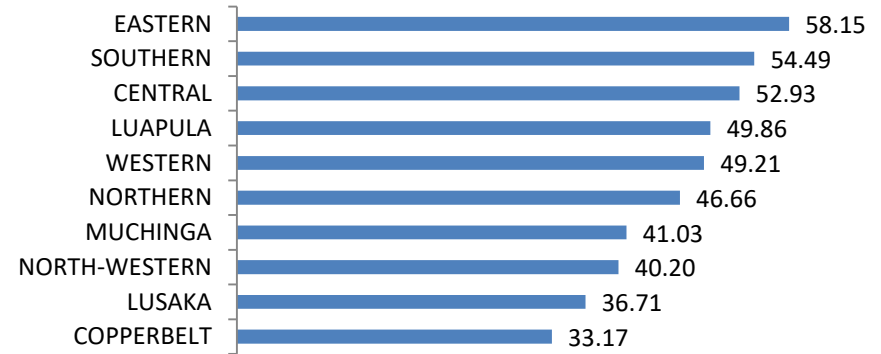


Figure 17: 2022 Creative and Technology Studies Grade Distributions by Region

2.9 Provincial Performance by Gender

2.2.27 The proportion of girls obtaining division one was higher than that of boys in, Southern, Copperbelt, North-western, Central and Western and Western Provinces.

2.2.28 Eastern province recorded the highest proportion of girls outperforming boys in division one by 3.77 percentage points.

2.2.29 In division two category six out of ten provinces recorded higher proportions of girls outperforming boys in terms of percentage points namely Southern (2.46), Copperbelt (2.22), North-western (0.62), Central (1.44), Western 2.37 and Lusaka (1.20)

Table 3: 2022 Grade 7 Overall Certificate Performances by Province and Gender

Province	Boys				Girls			
	Certificate Classification				Certificate Classification			
	Div. 1	Div. 2	Div. 3	Div. 4	Div. 1	Div. 2	Div. 3	Div. 4
Northern	10.10	28.70	24.98	36.22	8.94	27.31	24.43	39.31
Luapula	8.86	27.77	25.26	38.10	7.64	24.67	24.84	42.85
Southern	12.13	20.81	19.34	47.71	13.92	23.66	20.69	41.73
Eastern	10.85	27.36	23.88	37.91	8.77	24.89	24.97	41.37
Copperbelt	21.06	29.58	20.06	29.30	21.44	32.38	20.22	25.97
North-western	9.35	30.39	24.29	35.97	8.97	30.94	23.94	36.16
Central	9.23	20.92	19.60	50.26	10.03	22.29	20.46	47.22
Western	7.35	26.86	23.11	42.68	7.85	29.10	23.20	39.85
Lusaka	23.19	28.06	18.12	30.63	22.71	29.77	19.29	28.24
Muchinga	14.58	28.79	21.80	34.82	15.00	27.45	20.44	37.11

3.0 Analysis of performance by subject, content and cognitive area

This section evaluates the performance of the 2022 Grade 7 Composite examination candidates using item analysis. Using difficulty index, which is the percentage of learners who answered a question correctly, learners' performance was analysed. The index ranges from 0 to 100. A higher difficulty index indicates how easy an item was to the learners and vice versa. Mean item difficulty indexes were used to identify specific content areas and cognitive levels that learners found easy and/or difficult in the 2022 Grade 7 composite Examination. Distractor analysis was also used to identify misconceptions exhibited by the uninformed candidates (learners who could not distinguish between the correct and wrong responses).

3.1 English Language

The English examination is drawn from 13 content areas (topics) and 4 cognitive levels as shown in figure 17. The analysis by content area indicated that most candidates answered correctly questions on the topic 'Sentence Meaning' (52.22%) followed by 'Pronouns' (51.89%). In the 2021 examination, the topic "Pronouns" was the most well answered. With regards to the least well answered in 2022, candidates did not answer well items on 'Collective Nouns' (34.29%).

By cognitive level, candidates performed well on questions on Application (44.80%) followed by Comprehension (44.17%). Learners performed poor on questions that were on the cognitive level of Synthesis (40.89%).

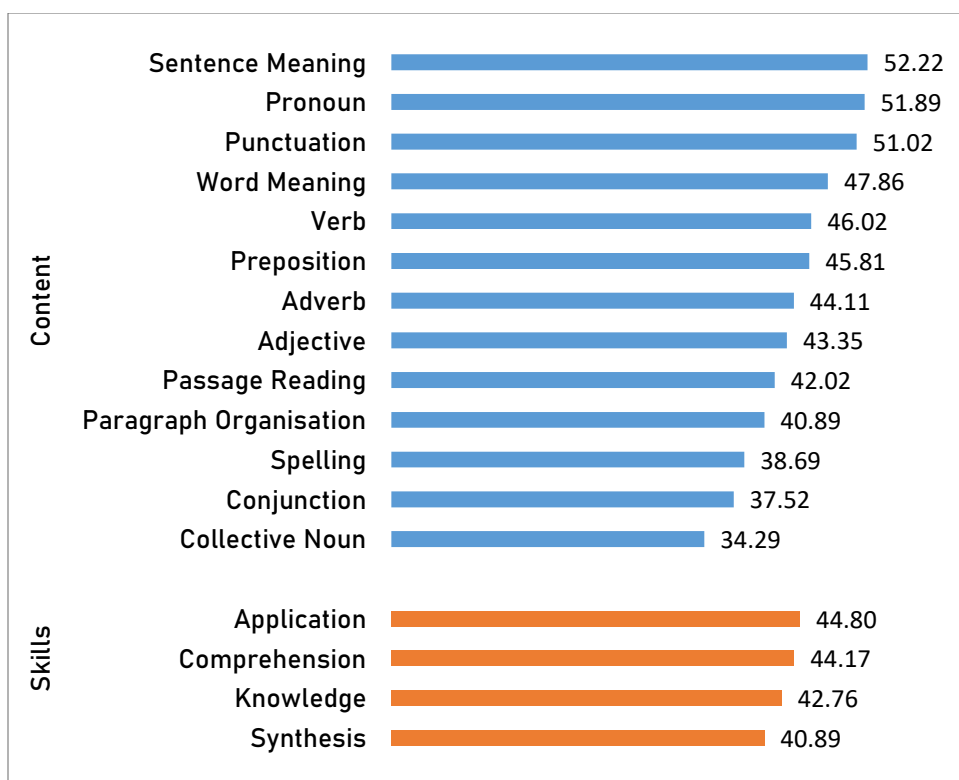


Figure 18: 2022 English Difficulty Index by Content Area/Cognitive Level

The following questions respectively, were well and not well answered in the 2022 English examination:

Questions that were well answered

1. **Question 1** on comparatives
2. **Question 2** on tenses
3. **Question 3** on reflexive pronoun
4. **Question 6** on prepositions
5. **Question 51** on comprehension

Questions that were poorly answered

1. **Question 18** on adverbs
2. **Question 20** on adjectives/Superlatives
3. **Question 46** on Reading comprehension
4. **Question 55** on Reading comprehension

5. **Question 60** on Reading comprehension

Errors and misconceptions that could have led to poor performance in the above questions

1. **Question 18:** Candidates did not have knowledge of qualifying a verb with adverb thereby most of them opted for A.
2. **Question 20:** Most candidates opted for 'A' because of failure to construct comparative form of an adjective + than.
3. **Question 46:** A clear case of mathematical miscalculation adding 15 to 1999.
4. **Question 55:** Most candidates went for option B because traditionally it is thought that there should be four months between December and March, I.e. counting December and March inclusively.
5. **Question 60:** The four departments were very obvious and clearly labelled. Candidates failed to understand that the same word 'department' is also associated with Home Economics.

Suggestions for Improvement

1. More practice through class exercises.
2. Encourage and promote the reading culture.
3. Cover all the syllabus content.
4. Emphasise the need for CPDs

3.2 Mathematics

The purpose of the mathematics assessments at Primary Level is to measure learner achievement against the set competencies as well as acquisition of reasoning and problem-solving skills as outlined in the syllabus. The Mathematics Examination focuses on Knowledge, Comprehension, Application and Problem-solving skills. Candidates are expected to apply mathematical concepts and skills to find the correct answers to a given problem. The paper comprises of computational, graphical and word problem question types.

Mathematics questions were drawn from 23 content areas (topics) across 3 cognitive levels as shown in figure 1. The analysis by content area indicate that, the topic ‘Number Patterns’ had the highest proportion of candidates answering the items correctly (80.67%) followed by ‘Addition and Subtraction’ (71.62 %). In 2021 the topic with most correct answers was ‘Index Notation’. The topic with the least proportion of candidate answering items correctly was ‘Measurements’ (31.53%). Just like in 2021 the topic ‘Measurements’ was the least. In short Number patterns was the easiest topic while Measurements was the most difficult topic during the 2022 examinations.

With regards to cognitive levels, the domain with the highest proportion of candidates answering items correctly was in Comprehension (51.23%) maintaining the same position as in 2021. The second highest in terms of proportions of candidates answering items correctly was in the Knowledge domain (45.54%). The least proportion was recorded in Application (44.99%). The same order was observed in 2021 examination. Refer to table 6.1).

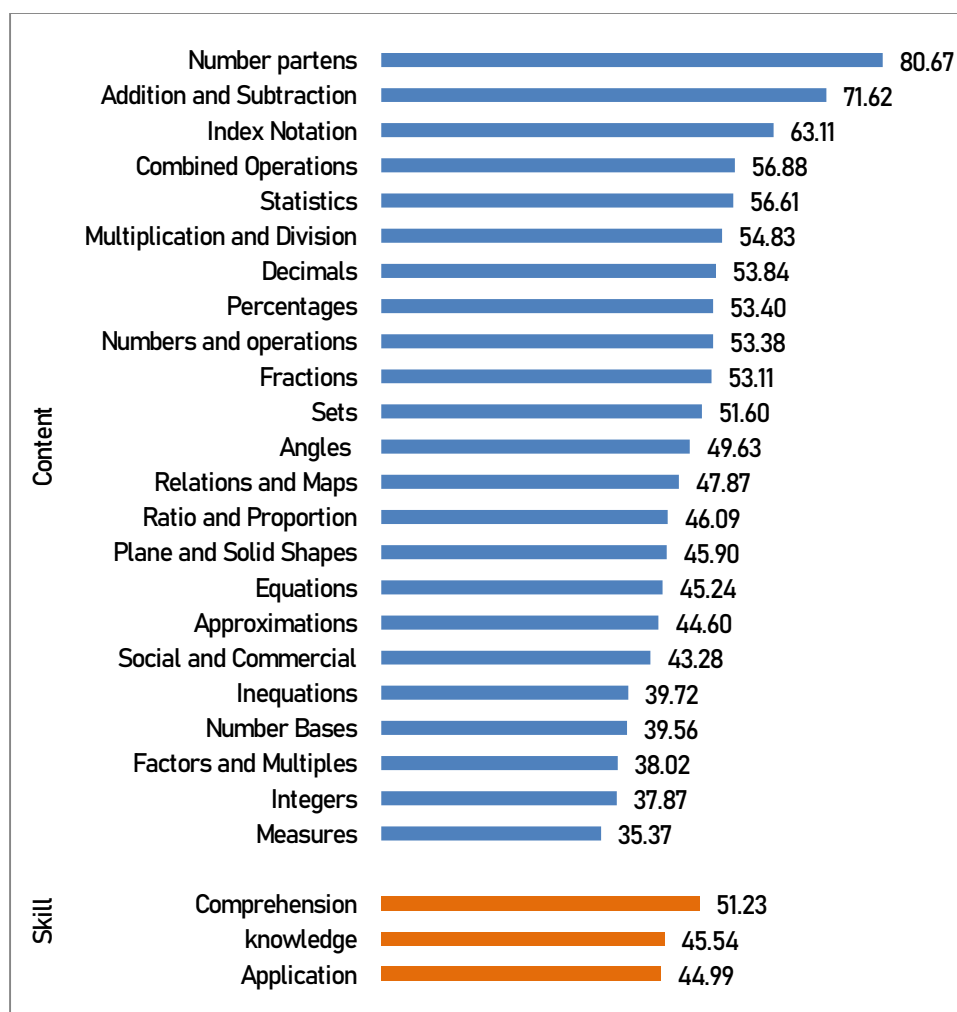


Figure 16: 2022 Mathematics Difficulty Index by Content Area/Cognitive Level

The following questions were not well answered in the 2022 Mathematics examination:

1. Question 54
2. Question 56
3. Question 57
4. Question 59

Errors and misconceptions that could have led to poor performance in the above questions

1. Factors and Multiples
2. Candidates were not able to differentiate between prime and odd numbers

3. Most of the candidates mistook 9 for a prime number
4. Number Bases
5. Candidates were not able to subtract numbers in base two because of lacking the concept of place value in base two.
6. Measures
7. Candidates were not able to interpret the difference between the diameter and the radius hence used incorrect formulae for circumference
8. The candidates were unable to manipulate the skills of counting the number of edges in a cube hence, failing to calculate the total length of the edges
9. On a different question on measures, candidates were not able to use the correct formula to find circumference of the circle
10. The concept of perimeter was a challenge to some candidates who multiplied the given sides of a parallelogram
11. Inequalities
12. Candidates could not solve an inequality involving division
13. Most of the candidates could not interpret the question correctly
14. Some of the candidates used subtraction instead of division, while others changed the inequality symbol even when they did not divide by a negative number.
15. Integers
16. Candidates could not order integers from the smallest to the largest because they did not understand the concept of negative and positive numbers (integers).
17. On a different question involving integers, candidates could not add numbers.
18. Some candidates subtracted the smaller number from the bigger number without considering the sign.

Suggestions for Improvement

1. Learners need to be given sufficient practice in order to differentiate between odd and prime numbers
2. Teachers should ensure learners understand place value in base two for them to add and subtract correctly in base two.

3. Learners must firstly identify the figures given and be able to the mathematical terminologies for them to correctly solve the problem.
4. Candidates should be taught from a practical point of view to understand perimeter, circumference, length of edges.
5. Candidates must be given sufficient practice on how to find the total length/perimeter and circumference of plane shapes.
6. Teachers should give more practice on the topic involving different operation (addition, subtraction, division and multiplication).
7. Candidates must be taught on how to add and subtract integers using a number line first.
8. Candidates must be given more practical work using number line.
9. Candidates must also be taught addition and subtraction without using a number line.

3.3 Integrated Science

In Integrated Science, questions were drawn from 5 content areas (topics) and 5 cognitive levels as shown in figure 18. The analysis by content area indicated that, on average, most candidates answered correctly questions on Plants and Animals (48.32%) followed by ‘The Human body’ (47.66%). in 2021 examinations, the topic Health was the highest difficult while on second position was ‘Plants and Animals’. The least proportion of those answering correctly was recorded in the topic ‘The Environment (43.52%) while for 2021 ‘The Human Body’ was the least.

Average difficulty by cognitive level showed that the majority of candidates answered correctly questions in the Knowledge domain (47.48%) followed by the Comprehension domain (46.51%). The lowest proportion of candidates answering items correctly was recorded in the Evaluation domain (43.24%). This order of difficulty across domains was also observed during the 2021 examination.

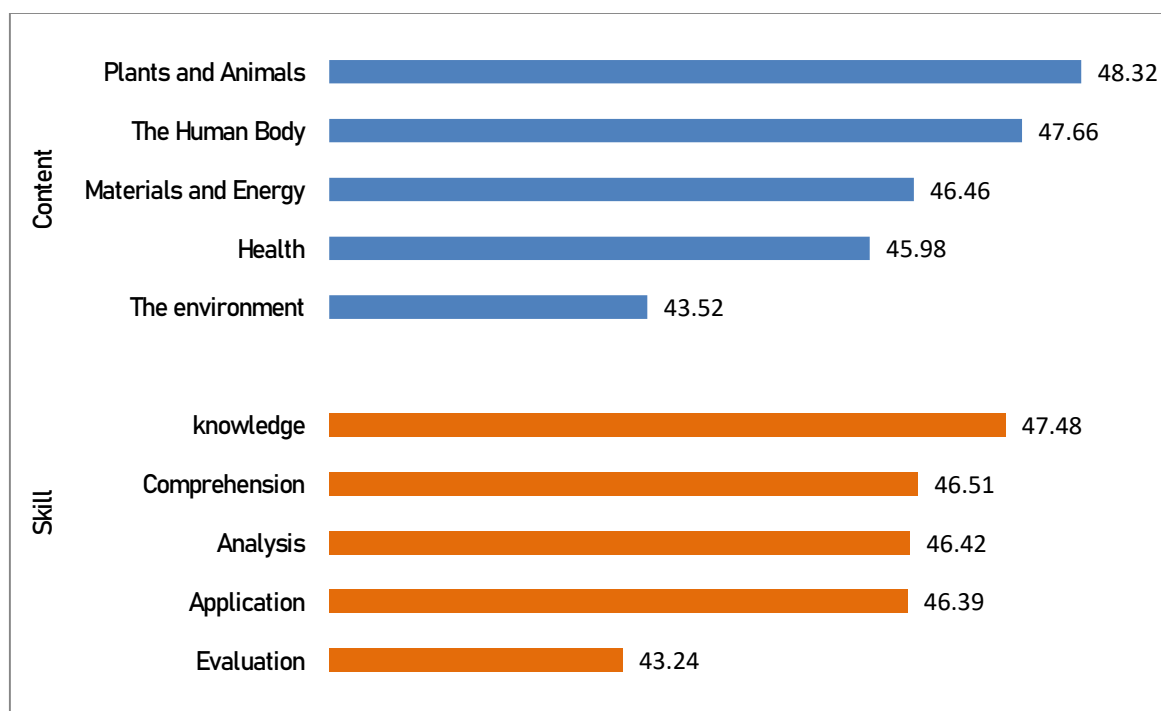


Figure 18:2022 Integrated Science Difficulty Index by Content Area/Cognitive Level

The following questions respectively, were well and not well answered in the 2022 Integrated Science examination.

Questions were well answered

1. **Question 1:** Candidates who scored correct option: 84.04%; level of difficulty 84.3%: question was too easy;
2. **Question 5:** Candidates who scored correct option 65.8%: level of difficulty 66.4%: question was too easy;
3. **Question 2:** Candidates who scored correct option: 64.3%; level of difficulty 64.8%: question was too easy;
4. **Question 13:** Candidates who scored correct option 59.7%: level of difficulty 60.2%: question was too easy;

Questions poorly answered

1. **Question 43:** Candidates who scored correct option 33%: level of difficulty 33.8%: question was hard;
2. **Question 44:** Candidates who scored correct option 38%: level of difficulty 38.7%: question was hard;
3. **Question 45:** Candidates who scored correct option 29.9%: level of difficulty 30%: question was hard;
4. **Question 46:** Candidates who scored correct option 33%: level of difficulty 33.8%: question was hard;
5. **Question 47:** Candidates who scored correct option 35.5%: level of difficulty 36.2%: question was hard;
6. **Question 48:** Candidates who scored correct option 31.3%: level of difficulty 31.8%: question was hard;
7. **Question 49:** Candidates who scored correct option 27%: level of difficulty 28%: question was hard;
8. **Question 50:** Candidates who scored correct option 24%: level of difficulty 25%: question was hard;

Errors and misconceptions that could have led to poor performance in the above questions

1. Lack of understanding on concept of planets
2. Learners failed to distinguish viruses from bacteria;
3. Learners lacked knowledge on viruses and bacteria;
4. Misconception by candidates and lack of understanding on transport system;
5. Candidates lacked understanding of the rain cycle.
6. Candidates lacked knowledge of terminologies such as condensation.
7. Candidates failed to interpret the diagram correctly
8. Reasons for low performance for Q40 and Q41:

9. Candidates lacked knowledge on social challenges for people living with HIV.
10. Candidate's failure to understand basic needs of livestock.
11. Failure by candidates to define mass
12. Reasons for low performance:
13. Candidates failed to analyze the information properly on germination.
14. Candidates lacked information on water retention, dietary needs and causes of day and night
15. Candidates lacked knowledge on scientific procedure such as resuscitation.
16. Candidates lacked understanding on teenage pregnancies and movement of heat.

Suggestions for improvement

1. Candidates must have exam practice to improve.
2. Teachers must ensure that they follow the teaching scheme and syllabus during lessons.
3. Adherence to correct methods of delivering lessons.
4. Candidates need to be taught with clear teaching aids and diagrams.
5. Teachers must ensure that they complete the syllabus early enough to create room for revision.
6. Teachers must emphasize on correct spellings, definition and terminologies.
7. Giving candidates more assessments in science.
8. Each topic must be followed by clear notes and homework.

3.4 Social Studies

The Social Studies examination is drawn from 7 content areas and across 4 cognitive domains. The analysis by content area indicates that the highest proportion of candidates answering questions correctly was in the topic ‘Learning about Money’ (56.17 %), followed by the topic ‘Transport and Communication’ (53.93%). The topic ‘Learning about Money’ had the highest proportion of learners answering items correctly even during the 2021 examinations. The topic ‘World Challenges’ had the least proportion of candidates who answered items correctly (36.56%).

With regards to cognitive levels, the highest proportion of candidates answering correctly was recorded in the ‘Comprehension’ level (51.65) followed by ‘Application’ level (50.64%). Analysis level was the least correctly answered domain (24.03%).

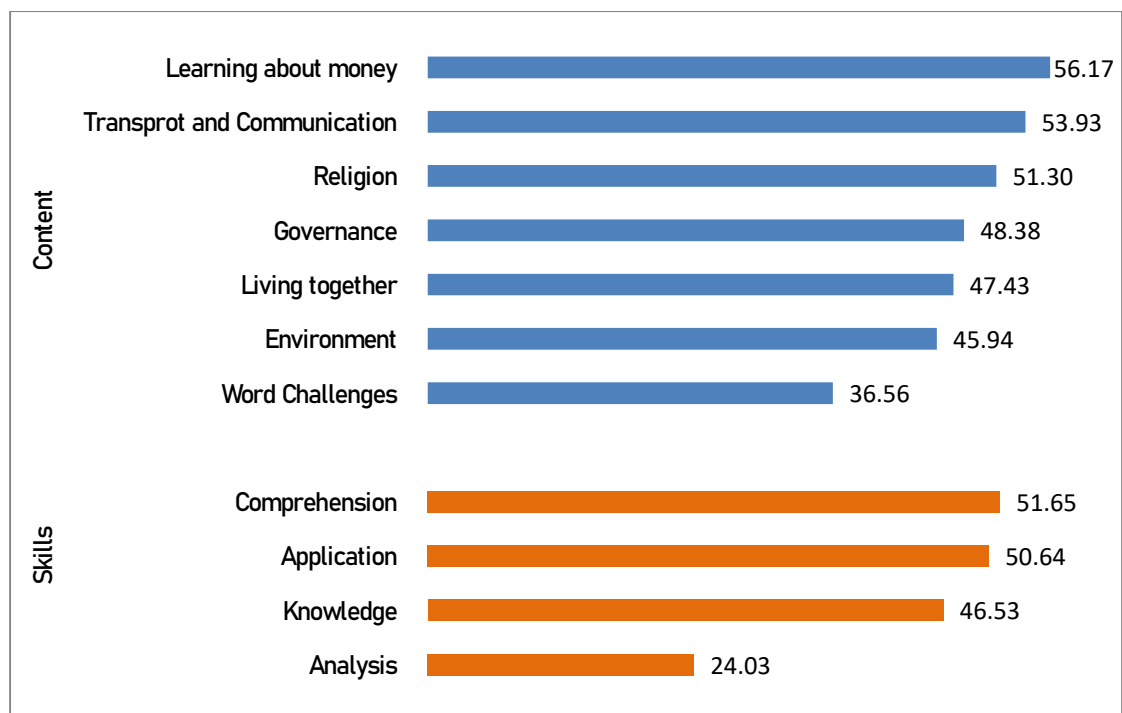


Figure 19: 2022 Social Studies Difficulty Index by Content Area/Cognitive Level

The following questions respectively, were well and not well answered in the 2022 Social Studies examination.

Question well answered

1. **Question 1:** Methods of keeping money
2. **Question 2:** Importance of forgiveness
3. **Question 3:** Interpretation of Bible story – David and Goliath

Questions not well answered

1. **Question 49:** Weather Symbols
2. **Question 52:** The Environment

Errors and misconceptions that could have led to poor performance in the above questions.

1. Law knowledge on the subject matter for question 49.
2. Inability to understand concepts and therefore guessing on question 49.
3. Failure to differentiate the meaning of isobar, isotherm, isohyets, latitude and longitudes.
4. For question 52 the stem was well structured but the key had a strong competitor which was also a correct answer.

Suggestions for Improvement

1. Teachers should attempt to cover the syllabus in full.
2. Teachers should give feedback from SBA to detect challenges at an early stage and mitigate them.
3. Teachers should use concrete examples in explaining concepts.
4. Subject learners to a lot of exercises to reinforce learning.

3.5 Creative and Technology Studies

The Creative and Technology Studies (CTS) comprises Expressive Arts, Home Economics and Technology Studies. The analysis by content area indicates that more learners answered correctly questions on Food (48.71%), followed by the topic ‘Entrepreneurship and Entrepreneurship (48.33%)’. The topic ‘Human Development’ had the least proportion of candidates who answered items correctly (36.36%).

With regards to cognitive levels, the highest proportion of candidates answering correctly was recorded in the ‘Knowledge’ level (48.95%) followed by ‘Analysis’ level questions (47.51%). Synthesis level questions recorded the least correctly answered cognitive level (30.71%).

Looking at CTS subject areas, performance was highest in Expressive Arts. Home Economics subject area recorded the least.

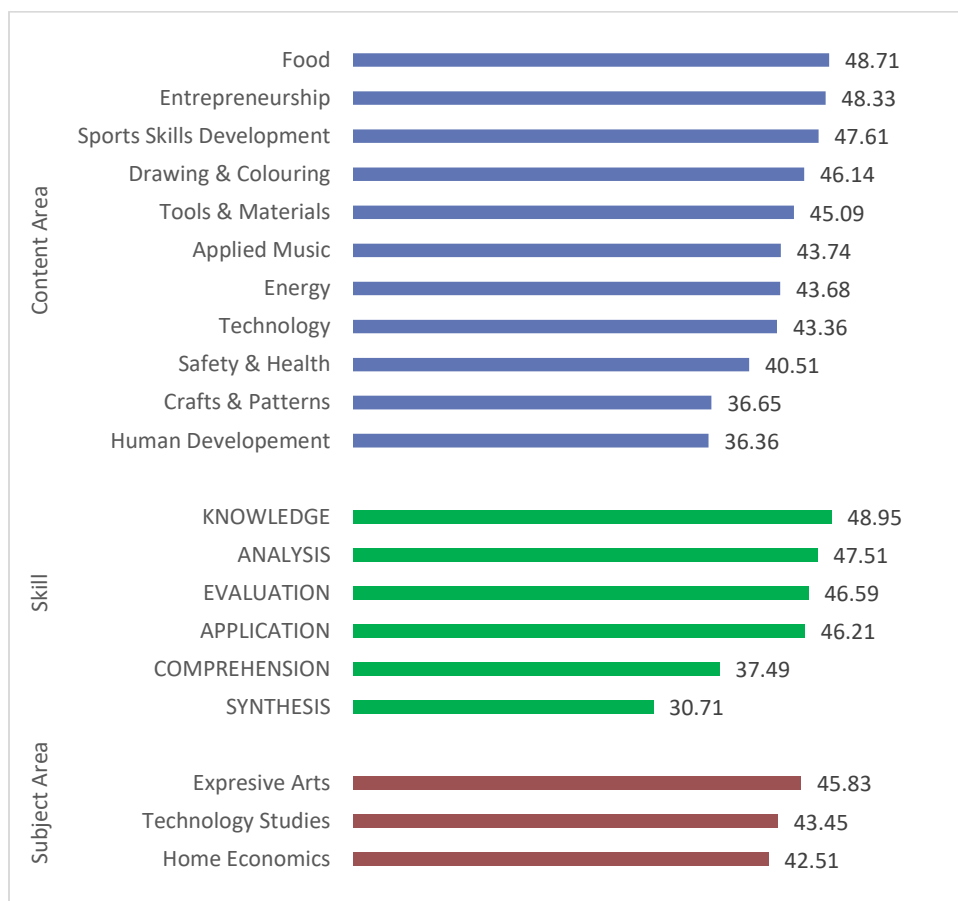


Figure 20: 2022 Creative and Technology Studies (CTS) Difficulty Index by Content Area/Cognitive Level

The following questions respectively, were well and not well answered in the 2022 Social Studies examination.

Well answered questions

1. **Question 1:** Drawing and Colouring
2. **Question 2:** Sports Skills Development
3. **Question 3:** Applied Music
4. **Question 41:** Drawing and Colouring
5. **Question 42:** Technology

Not well answered questions

1. **Question 14:** Safety and Health
2. **Question 20:** Sports Skills Development
3. **Question 58:** Technology
4. **Question 60:** Drawing and Colouring.

Errors and misconceptions that could have led to poor performance in the above questions.

1. **Question 14:** The question required candidates to identify the sport that usually affects the environment. Amongst the answer options was: Discus, Javelin, Polo and Volleyball. The majority of candidates opted for the familiar sport amongst the four options, volleyball instead of the correct answer Polo. This could indicate the need for teachers to ensure that they engage learners in activities that help them understand how certain sports can have an effect on the environment.
2. **Question 20:** The was on the steps of life saving skills. Candidates' failure to indicate the missing step in rescuing a drowning person indicated candidates' lack of knowledge of rescue skills. to showed lack of understanding of the question. The question required candidates misunderstood the question for saving someone's life.

3. **Question 58:** The question required candidates to indicate the view which is also known as bird eye view. The correct answer was 'plan' but over 70 percent of the candidates went for the wrong answers which were; back, front and side. This indicated lack of knowledge and awareness of different orthographic projection views.
4. **Question 60:** The question required candidates understanding of isometric drawings. Over 60 percent answer the question correctly indicting lack of basic principles and knowledge of isometric drawings.

Suggestions for Improvement

1. Teachers must complete the syllabus.
2. Teachers should engage learners in practical work.
3. Teachers should give feedback from SBA to detect challenges at an early stage and mitigate them.
4. Teachers should use concrete examples and synonyms when explaining concepts.
5. Subject learners to a lot of exercises to reinforce learning.

4.0 Grade 8 Progression Rates

All the 449,779 candidates who sat the 2022 Grade 7 Composite Examination were selected to Grade 8, representing a national progression rate of 100 percent. The progression rate has remained at 100% for the past four years a matter which is being now subject to review following the concerns on the negative effects that have been observed by various stakeholders in the education sector. Of the 449,779 candidates, 233,247 (51.85%) were girls while 216,532 (48.15%) were boys.

Table 4: 2019 to 2023; Grade 7 Progression Rates by Province

		NUMBER SAT			NUMBER SELECTED			PERCENTAGE SELECTED						
	REGION	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	2022	2021	2020	2019
0	MUCHINGA	9,626	9,430	19,056	9,626	9,430	19,056	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1	NORTHERN	15,905	15,020	30,925	15,905	15,020	30,925	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2	LUAPULA	14,141	13,370	27,511	14,141	13,370	27,511	100.00	100.00	100.00	100.00	100.00	100.00	100.00
3	SOUTHERN	30,130	32,347	62,477	30,130	32,347	62,477	100.00	100.00	100.00	100.00	100.00	100.00	100.00
4	EASTERN	21,438	23,094	44,532	21,438	23,094	44,532	100.00	100.00	100.00	100.00	100.00	100.00	100.00
5	COPPERBELT	30,741	34,825	65,566	30,741	34,825	65,566	100.00	100.00	100.00	100.00	100.00	100.00	100.00
6	NORTHWESTERN	16,255	17,161	33,416	16,255	17,161	33,416	100.00	100.00	100.00	100.00	100.00	100.00	100.00
7	CENTRAL	25,466	26,698	52,164	25,466	26,698	52,164	100.00	100.00	100.00	100.00	100.00	100.00	100.00
8	WESTERN	15,448	17,269	32,717	15,448	17,269	32,717	100.00	100.00	100.00	100.00	100.00	100.00	100.00
9	LUSAKA	37,382	44,033	81,415	37,382	44,033	81,415	100.00	100.00	100.00	100.00	100.00	100.00	90.01
	TOTAL ZAMBIA	216,532	233,247	449,779	216,532	233,247	449,779	100.00	100.00	100.00	100.00	100.00	100.00	98.14

5.0 Conclusion

- 5.1 There were **493,823** candidates who entered for the 2022 Grade 7 Composite Examination. Of these, **493,618** were from the Zambian schools and **205** from St. Jeff College in Johannesburg, South Africa. Generally, candidature increased by 7.92 percent from **457, 590** in 2021. The number of boys who entered for the examination was **238, 051** (48.21%) while that of girls was **255,772** (51.79%). Candidature by sex increased by **0.14** percentage points for boys and decreased by the same margin for girls from 2021.
- 5.2 Generally, absenteeism from the examination decreased from **10.59** percent (48,509 candidates) in 2021 to 8.99 percent (44,393) in 2022. Of the 44,393 candidates who were absent from the 2022 Grade 7 Composite Examination, 21,757 (9.14%) were boys while 22,636 (8.85%) were girls. In 2022, absenteeism reduced. for both boys and girls who sat the examinations. For girls it reduced from 10.31 percent in 2021 to 8.85 percent in 2022 while that of boys reduced from 10.90 percent in 2021 to 9.14 percent in 2022.
- 5.3 The 2022 certificate awards were Similar to 2021, 2020 and 2019. More candidates (37.30 %) in 2022 fell in the division four (4) category. The 2022 division 4 proportions however, represented an improvement of 0.29 percentage points from 2021 and, the lowest recorded in 3 years.
- 5.4 In 2022 compared to 2021 the mean scores marginally increased by an average of 0.99 marks across all the subjects. Similar to 2021, the analysis of mean standard scores by gender revealed that girls performed better than boys in all subjects except Mathematics.
- 5.5 The item analysis for the four subjects Mathematics, English, integrated Science and Social Studies revealed that the trends in levels of difficulty for most topics and cognitive levels across the subjects was similar to that of 2021.
- 5.6 The improvement in performance projected by the mean scores may be attributed to normalization of learning time after the recess of the Covid -19 pandemic as well as the many interventions that have been put in place by the ministry of Education to catch up on lost time.

- 5.7** The analysis of candidates Performance in Selected Subjects by content area and cognitive level brought out useful information about problematic topics, misconceptions and suggestions for improvement which teachers can use in order to improve their pedagogical skills.
- 5.8** Policy makers and practicing teachers' are encouraged to utilise the valuable information on specific outcomes and knowledge, skills and values where learners exhibited high or low competency.