PLANNER & TRACKER FOR RECOVERY ANNUAL TEACHING PLAN (ATP)

MATHEMATICS

GRADE 6 TERM 4

Helping teachers and learners to catch up with learning losses, master new content and acquire skills for the future.

2021

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ABOUT THE PLANNER AND TRACKER

This 2021 Revised Recovery Curriculum and Assessment Planner and Tracker is provided by the National Education Collaboration Trust (NECT) on behalf of the Department of Basic Education (DBE)! We hope that this programme provides you with additional skills, methodologies and content knowledge that you can use to teach your learners more effectively.

WHAT IS NECT?

In 2012 our government launched the National Development Plan (NDP) to eliminate poverty and reduce inequality by the year 2030. Improving education is an important goal in the NDP which states that 90% of learners will pass Maths, Science and languages with at least 50% by 2030. This is an ambitious goal for the DBE to achieve on its own, so the NECT was established in 2015 to assist in improving education.

The NECT has successfully brought together groups of people interested in education so that we can work collaboratively to improve education. These groups include the teacher unions, businesses, religious groups, trusts, foundations and NGOs.

PURPOSE OF PLANNER AND TRACKER

1) To mediate the amendments of the trimmed and re-organised 2021 Annual Teaching Plan including School-Based Assessments for Mathematics Grade 6.
2) To ensure that meaningful teaching continues during the remaining teaching time as per the school calendar for TERM 4.
3) To assist teachers with guided pacing and sequencing of curriculum content and assessment.
4) To enable teachers to cover the core skills and knowledge in each grade within the available time.
5) To assist teachers with planning for the different forms of assessment.
6) To ensure learners are adequately prepared for the subsequent year/s in terms of skills, knowledge, attitudes and values.

PREAMBLE

It must be emphasized that Term 1, term 2 and term 3 content coverage by teachers were impacted by COVID-19. Schools were particularly disrupted by the fact that learners only attended school for 50% of the time and had to endure variations of the rotation system implemented in the schools. Disruption in schools has also meant disruption in different forms of assessment, so it has been hard to fully pin down exactly how much the school closures and transitions in and out of virtual learning have affected students' mathematical learning, but the evidence so far does not bode well.

Curriculum coverage in term 1, 2 and 3, must be viewed and implemented in term 4, in the light of some contextual realities that includes the following:

1) 2020 was an abnormal year in terms of content coverage. Learners have progressed to a higher grade level without learning all the core skills required for that grade.
2) Some learners were not in school for most of 2020 and perhaps part of 2021.
3) Mathematics is almost always formally learned at school. Many of our parents are often less well-equipped to help their children with mathematics, at a time when parent support can be even more crucial to student progress. This means that the burden falls directly on our teachers.

4) Broader stress and trauma related to the pandemic may worsen existing mathematics anxiety in some students, and mathematics anxiety can exacerbate students' other stress while in class.

Awareness of the above challenges and the consequent assumptions that emerge out of it, is crucial for the implementation of the Revised ATPs emphasizing the recovery of skills not yet mastered in mathematics. This Planner and Tracker is in alignment with the theme of recovery of skills not learnt and covers the following:

1) aims to ensure that the critical skills, knowledge, values and attitudes outlined in the ATPs are covered over this time period.
2) Curriculum Reorganisation and Trimming for this term purports to reduce the envisaged curriculum to manageable core content , skills, knowledge, attitudes and values to enhance deep and meaningful learning.
3) Create opportunities through adjusted ATPs to strengthen pre-knowledge, consolidation, revision, and deeper learning.
4) The Planner and Tracker clearly define the core knowledge, skills, attitude to be taught and assessed more specifically to guide and support teachers.
5) It also aligns curriculum content and assessment to the available teaching time. Entrench assessment for learning as a Pedagogical Approach to address the learning losses.
6) Be used as planning tool to inform instruction during the remaining school terms.

ADJUSTED SCHOOL CALENDAR

SCHOOL TERMS	DATES	TEACHING DAYS
Term 1	15 February - 23 April	50(10 weeks)
Term 2	3 May – 9 July	50(10 weeks)
Term 3	26 July – 01 October	50(10 weeks)
Term 4	**11 Oct - 15 Dec**	**48(10 weeks)**

NOTES:

- TEACHING APPROACH in this term assumes that ALL learners are attending schools and the Rotation system may not be implemented meaning that schools may implement normal timetable.
- NECT TERM 4 Planner and Tracker has 48 teaching and learning days, of which 15 days are used for formative and summative Assessment days.
- NECT Term 4 Planner and Tracker focuses on Deep learning through assessment for learning - There is no time for assessment that does not inform the way forward. Teachers should consolidate, revise and remediate through error analysis that leads to skills mastery.

MANAGING TIME ALLOCATED IN THE TRACKER

- The tracker for each term contains details of work to be covered over 60 lessons per term, six per week for ten weeks.
- The CAPS prescribes **six hours** of Mathematics per week in Grade 6.
- Each school will organise its timetable differently, so the programme of lessons is based on work in the Learner's Book and DBE workbook, which should take just over an hour per day to complete.

- You might have to divide the sessions in the programme slightly differently to accommodate the length of the lessons at your school.
- Depending on the pace at which your learners work, and how much support is needed,
- you might also have to supplement the set activities by using other resources to ensure that the full six hours allocated to teaching Mathematics is used constructively.
- The breakdown of work to be done each week corresponds to the 'annual teaching plan and programme of assessment' drawn up by the Provincial Department of Education; however, the tracker gives a more detailed outline of what should be taught each day.
- This tracker is designed for a term that is 10 weeks long.
- In most weeks, one lesson is set aside for you to catch up on work not done in the previous five lessons, or to provide remedial support or enrichment.
- The formal teaching programme, the project, some revision, and the term test should be completed by the end of Week 9.

REMEMBER: The teacher should employ group teaching based on principles of differentiation – cater for the needs of every learner by making sure every learner masters the fundamental skills in mathematics. The teacher is also mindful to plan well for effective assessment for learning to inform the remediation and teaching, through the skills mastery approach applied in this Planner and Tracker.

LINKS TO THE DBE WORKBOOKS

The tracker gives links to worksheets in the DBE workbooks relevant to the content described for each day. The worksheets are referred to by worksheet number and page number. These workbooks should be used in conjunction with the Learner's Book activities. You should review the suggested worksheets before each lesson and decide how best to use them – for teaching, revision, extension or consolidation, in class or for homework.

TEACHING TIME

Since there are 6 hours allocated for Mathematics per week, the following is a suggested plan for daily lessons.

WEEK: 6 hours	
Consolidation of Concepts – skills mastery and other New Concept – class activity	 10 min 50 min

CONTENT COVERAGE

TERM 4	Week 1 4 days	Week 2 5 days	Week 3 5 days	Week 4 5 days:	Week 5 5 days	Week 6 5 days	Week 7 5 days	Week 8 5 days	Week 9 5 days	Week 10 3 days
Hours per week	5 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	3 hrs.
Hours per topic	6 hrs.		6 hrs.	12 hrs.		12 hrs.			6 hrs	3 hrs.
Topics, concepts and skills	**MASS** **Practical measuring** • Estimate and practically measure 3-D objects using measuring instruments such as: – bathroom scales (analogue and digital); – kitchen scales (analogue and digital) – balances • Record, compare and order mass of objects in grams (g) and kilograms (kg). **Calculations and problem-solving** • Solve problems in contexts involving mass • Convert between grams and kilograms to include fraction and decimal forms (to 2 decimal places)		**TIME** **Reading time and time instruments** • Read, tell and write time in 12-hour and 24-hour formats on both analogue and digital instruments in: – hours – minutes – seconds • Instruments include clocks, watches and stopwatches **Reading calendars** **Calculations and problem-solving related to time** • Solve problems in contexts involving time • Read time zone maps and calculating time differences based on time zones • Calculation of time intervals where time is given in: – seconds and/or minutes; – minutes and/or hours – hours and /or days – days and/or weeks and/or months – years and/or decades – centuries, decades and years	**DATA HANDLING** **Collecting and organising data** **Collect data** • Use tally marks and tables for recording • Use simple questionnaires (yes/no type response) • Order data from smallest group to largest group **N.B PROVIDE LEARNERS WITH DATA TO SAVE TIME** **Representing data** • Draw a variety of graphs to display and interpret data including: – pictographs with many-to-one representations – bar graphs and double bar graphs **Analysing, interpreting and reporting data** • Critically read and interpret data represented in: – words – pictographs – bar graphs – double bar graphs – pie charts • Analyse data by answering questions related to: – data categories, including data intervals – data sources and contexts – central tendencies – (mode and median) • Summarise data verbally and in short written paragraphs that include – drawing conclusions about the data – making predictions based on the data	**USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT** **Solving problems** • Solve problems in contexts involving whole numbers and fractions, including: – financial contexts – measurement contexts – fractions, including grouping and equal sharing – comparing two or more quantities of the same kind (ratio) – comparing two quantities of different kinds (rate)	**REVISION**	**FORMAL ASSESSMENT TASK** **TEST** All Term 3 and Term 4 topics

CORE QUESTIONS	DID ALL LEARNERS MASTER TERM 1 AND TERM 2 SKILLS?	DID ALL LEARNERS MASTER TERM 3 SKILLS?	NEW CONCEPTS/CONTENT

RECOMMEN-DATION	1. Implement at least two Skills Mastery (SM) formative assessments every week. 2. Consolidation of Concepts – 10 minutes – twice a week apply 5-item SM assessments. 3. Teacher – can use SM as individual, pair, small group, or whole class activity. 4. Aim – to consolidate, remediate and work towards mastery. 5. Record – monitor learners who have learning gaps in the REFLECTION section of the Tracker	NEW CONCEPTS/CONTENT

WEEKLY PLANNER AND TRACKER

RECOMMENDATION

BASELINE TERM 4: Implement DBE Diagnostic – see exemplar In Planner and Tracker – or any similar diagnostic – Based on term 1, term 2 and term 3 core skills. Teachers are encouraged to use the exemplar, based on what content they have completed. Meaning teachers can select different items in the diagnostic for their purposes.

WHEN: Day 1, allow learners to complete individually and/or work with ability groups based on your classroom context. Day 2 is set aside for remediation purposes.
NUMBER OF ITEMS: Grade 6 = 20 items – depending on your context and ability groups
ITEM BANK: Items can also be drawn from previous:

1) BASELINE/READINESS assessment, 2) Assessment Resources in this TRACKER or 3) the DBE Item Bank and 4) PREPARATION: Test, Marking Guideline/s, Marksheet and apparatus.

11 – 15 October 2021

Week 1					
Lesson	**ATP Content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
1		Baseline: (Revision, consolidation of term 1,2 & 3 skills)			
2		Baseline: Remediation – error analysis			
3	MASS Practical measuring Estimate and practically measure 3-D objects using measuring instruments such as:– bathroom scales (analogue and digital);– kitchen scales (analogue and digital)– balances. Record, compare and order mass of objects in grams (g) and kilograms (kg).	Using analogue and digital scales. Select appropriate units of measurement	Bk 2 No. 65 (pp. 2 & 3)		
4	MASS Practical measuring Estimate and practically measure 3-D objects using measuring instruments such as:– bathroom scales (analogue and digital);– kitchen scales (analogue and digital)– balances. Record, compare and order mass of objects in grams (g) and kilograms (kg).	Define and use of scales. Converting between grams and kilograms Estimate weights of objects	Bk 2 No. 66a (pp. 4 & 5)		
5	MASS Practical measuring Estimate and practically measure 3-D objects using measuring instruments such as:– bathroom scales (analogue and digital);– kitchen scales (analogue and digital)– balances. Record, compare and order mass of objects in grams (g) and kilograms (kg).	Complete intervals for spring-balance scales Record and measure objects Converting between grams and kilograms	Bk 2 No. 66b (pp. 6 & 7)		
6	MASS Calculations and problem-solving: Solve problems in contexts involving mass Convert between grams and kilograms to include fraction and decimal forms (to 2 decimal places)	Define mass Convert from grams to kilograms, vice versa. Estimate weight. Use scales to measure weight	Bk 1 No. R13 (pp. xi & xii)		

Notes for the teacher.

1. The Baseline Assessment can be administered one-on one or to a group of at least 5 learners at a time – it is an assessment FOR learning.
2. The onus is on the teacher to prepare substantial activities for the rest of the learners while the Baseline Assessment is being administered.
3. Prepare well - study the Baseline Assessment i.e. familiarise yourself with the apparatus and templates that must be used.

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Using analogue and digital scales. • Select appropriate units of measurement • Define and use of scales. • Converting between grams and kilograms • Estimate weights of objects • Complete intervals for spring-balance scales • Record and measure objects • Define mass • Use scales to measure weight	What will you change next time? Why? **Struggling Learners Names:** **HOD:** **Date:**

18 - 22 October 2021

Week 2					
Lesson	**ATP Content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
7	MASS Calculations and problem-solving: Solve problems in contexts involving mass Convert between grams and kilograms to include fraction and decimal forms (to 2 decimal places)	Balancing scales Comparing mass and capacity Select appropriate units of measure Solving context problems involving mass	Bk 2 No. 67 (pp. 8 & 9)		
8	MASS Calculations and problem-solving: Solve problems in contexts involving mass Convert between grams and kilograms to include fraction and decimal forms (to 2 decimal places)	Comparing mass and capacity Solving context problems involving mass	Bk 2 No. 68a (pp. 10 & 11)		
9	MASS Calculations and problem-solving: Solve problems in contexts involving mass Convert between grams and kilograms to include fraction and decimal forms (to 2 decimal places)	Comparing mass and capacity Solving context problems involving mass	Bk 2 No. 68b (pp. 12 & 13)		
10	TIME: Reading time and time instruments: Read, tell and write time in 12-hour and 24-hour formats on both analogue and digital instruments in:– hrs– mins – secs Instruments include clocks, watches and stopwatches. Reading calendars	Calculate time in am and pm. Use analogue instrument Use digital instrument. Converting between time units	Bk 1 No. 16a (pp. 46 & 47)		
11	TIME: Reading time and time instruments:	Calculate time in am and pm in context Converting between	Bk 1 No. 16b (pp. 48 & 49)		

	Read, tell and write time in 12-hour and 24-hour formats on both analogue and digital instruments in:– hrs– mins – secs Instruments include clocks, watches and stopwatches. Reading calendars	time units Reading calendars			
12	Assessment Activity: Consolidate and revise – assess learners fraction understanding, remediate for understanding – use SM Activities				

Reflection

DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Balancing scales • Comparing mass and capacity • Select appropriate units of measure • Solving context problems involving mass • Calculate time in am and pm. • Use analogue instrument • Use digital instrument. • Converting between time units • Calculate time in am and pm in context • Reading calendars	What will you change next time? Why? **Struggling Learners Names?** **HOD:** **Date:**

25 – 29 October 2021

Week 3					
Lesson	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
13	TIME: Calculations and problem-solving time include problems in contexts involving time, calculation of time intervals where time is given in: – seconds and/or minutes, minutes and/or hours– hours and/or days – days, weeks and/or months, years and/or decades, centuries	Calculate time in years, decades Converting between time units, years to weeks, etc	Bk 1 No. 17a (pp. 50 & 51)		
14	TIME: Calculations and problem-solving time include problems in contexts involving time, calculation of time intervals where time is given in: – seconds and/or minutes, minutes and/or hours– hours and/or days – days, weeks and/or months, years and/or decades, centuries	Calculate time in years, decades and centuries Converting between time units, centuries to years, etc Solve time in real problem-solving context	Bk 1 No. 17b (pp. 52)		
15	TIME: Calculations and problem-solving time include problems in contexts involving time, calculation of time intervals where time is given in: – seconds and/or minutes, minutes and/or hours– hours and/or days – days, weeks and/or	Calculate time in years, decades and centuries Converting between time units, centuries to years, etc	Bk 1 No. 17b (pp. 53)		

	months, years and/or decades, centuries	Solve time in real problem-solving context			
16	TIME: Calculations and problem-solving time include problems in contexts involving time, calculation of time intervals where time is given in: – seconds and/or minutes, minutes and/or hours– hours and/or days – days, weeks and/or months, years and/or decades, centuries	Calculate time in decimal form Solve time in real problem-solving context	Bk 1 No. 54 (pp. 144)		
17	TIME: Calculations and problem-solving time include problems in contexts involving time, calculation of time intervals where time is given in: – seconds and/or minutes, minutes and/or hours– hours and/or days – days, weeks and/or months, years and/or decades, centuries	Calculate time in decimal form Solve time in real problem-solving context	Bk 1 No. 54 (pp. 145)		
18	Assessment Activity: Consolidate and revise – assess learners fraction understanding, remediate for understanding – use SM Activities				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Calculate time in years, decades • Converting between time units, years to weeks, etc • Calculate time in years, decades and centuries • Converting between time units, centuries to years, etc • Solve time in real problem-solving context • Calculate time in decimal form	What will you change next time? Why? **Struggling Learners names:** **HOD:** **Date:**

1 – 5 November 2021

Week 4					
Day	**ATP Content**	**CAPS content, concepts, skills**	**DBE workbook**	**Resources**	**Date**
19	DATA HANDLING Collecting and organising data: Collect data-Use tally marks and tables for recording-Use simple questionnaires (yes/no type of response)-Order data from smallest group to largest Representing data-Draw a variety of graphs to display and interpret data including:	Sort given data Represent data using a bar graph Answer questions Collect data	Bk 1 No. R16 (pp. xlviii & xlix)		

	– pictographs with many-to-one representations – bar graphs and double bar graphs				
20	DATA HANDLING Collecting and organising data: Collect data-Use tally marks and tables for recording-Use simple questionnaires (yes/no type of response)-Order data from smallest group to largest Representing data-Draw a variety of graphs to display and interpret data including: – pictographs with many-to-one representations – bar graphs and double bar graphs	Sort data using tally marks. Complete frequency tables Label a pie chart	Bk 1 No. 20 (pp. 64 & 65)		
21	DATA HANDLING Analysing, interpreting and reporting data Critically read and interpret data represented in:– words– pictographs– bar graphs– double bar graphs– pie charts Analyse data by answering questions related to:– data categories, including data intervals – data sources and contexts– central tendencies (mode and median) Summarise data verbally and in short written paragraphs that include:– drawing conclusions about the data– making predictions based on the data	Define mean, median and mode Apply the different understanding of averages in data Finding the measures of central tendencies	Bk 1 No 21 (pp. 66 & 67)		
22	DATA HANDLING Analysing, interpreting and reporting data Critically read and interpret data represented in:– words– pictographs– bar graphs– double bar graphs– pie charts Analyse data by answering questions related to:– data categories, including data intervals – data sources and contexts– central tendencies (mode and median) Summarise data verbally and in short written paragraphs that include:– drawing conclusions about the data– making predictions based on the data	Read graphs Interpret bar and pie charts Define pie chart Apply percentages to pie charts	Bk 1 No 22 (pp. 68 & 69)		
23	DATA HANDLING Collecting and organising data: Collect data-Use tally marks and tables for recording-Use simple questionnaires (yes/no type of response)-Order data from smallest group to largest Representing data-Draw a variety of graphs to display and interpret data including: – pictographs with many-to-one representations – bar graphs and double bar graphs	Collect data using a questionnaire Describe the purposes of different questionnaires Decide on hypothesis approach	Bk 1 No. 23 (pp. 70 & 71)		
24	Assessment Activity: Consolidate and revise – assess learners fraction understanding, remediate for understanding – use SM Activities				
	Reflection				

DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO:	What will you change next time? Why? **Struggling Learners Names**:
• Sort given data • Represent data using a bar graph • Answer questions • Collect data • Sort data using tally marks. • Complete frequency tables • Label a pie chart • Define mean, median and mode • Apply the different understanding of averages in data • Finding the measures of central tendencies • Read graphs • Interpret bar and pie charts • Define pie chart • Apply percentages to pie charts • Collect data using a questionnaire • Describe the purposes of different questionnaires • Decide on hypothesis approach	**HOD:** **Date:**

8 – 12 October 2021

Week 5					
Day	**ATP Content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
25	DATA HANDLING Collecting and organising data: Collect data-Use tally marks and tables for recording-Use simple questionnaires (yes/no type of response)-Order data from smallest group to largest Representing data-Draw a variety of graphs to display and interpret data including: – pictographs with many-to-one representations – bar graphs and double bar graphs	Sort given data using tally marks Represent data in a frequency table Answer questions Collect data	Bk 2 No. 91 (pp. 76 & 77)		
26	DATA HANDLING Collecting and organising data: Collect data-Use tally marks and tables for recording-Use simple questionnaires (yes/no type of response)-Order data from smallest group to largest Representing data-Draw a variety of graphs to display and interpret data including: – pictographs with many-to-one representations – bar graphs and double bar graphs	Grouping and ordering data Complete frequency table Answer questions relating to table Record data	Bk 2 No. 92a (pp. 78 & 79) No. 92b (pp. 80 & 81)		
27	DATA HANDLING Collecting and organising data:	Understanding pictographs	Bk 2 No. 93 (pp. 82 & 83)		

	Collect data-Use tally marks and tables for recording-Use simple questionnaires (yes/no type of response)-Order data from smallest group to largest Representing data-Draw a variety of graphs to display and interpret data including: – pictographs with many-to-one representations – bar graphs and double bar graphs	Answer questions relating to pictograph Record data	No. 92b (pp. 80 & 81)		
28	DATA HANDLING Analysing, interpreting and reporting data Critically read and interpret data represented in:– words– pictographs– bar graphs– double bar graphs– pie charts Analyse data by answering questions related to:– data categories, including data intervals – data sources and contexts– central tendencies (mode and median) Summarise data verbally and in short written paragraphs that include:– drawing conclusions about the data– making predictions based on the data	Interpret pie charts Define pie chart Apply percentages to pie charts Use a pictograph to draw a pie chart Answer pie chart related questions	Bk 2 No 94 (pp. 84 & 85)		
29	DATA HANDLING Analysing, interpreting and reporting data Critically read and interpret data represented in:– words– pictographs– bar graphs– double bar graphs– pie charts Analyse data by answering questions related to:– data categories, including data intervals – data sources and contexts– central tendencies (mode and median) Summarise data verbally and in short written paragraphs that include:– drawing conclusions about the data– making predictions based on the data	Analysing data from variety of graphs Summarise data from graphs to answer questions Apply mean, median and mode to given data Make predictions Draw conclusions	Bk 2 No 95 (pp. 86 & 87) No 96 (pp. 88 & 89		
30					

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Sort given data using tally marks • Represent data in a frequency table • Grouping and ordering data • Complete frequency table • Answer questions relating to table • Record data • Understanding pictographs • Answer questions relating to pictograph • Interpret pie charts	What will you change next time? Why? **Struggling Learner names:** **HOD:** **Date:**

• Define pie chart • Apply percentages to pie charts • Use a pictograph to draw a pie chart • Answer pie chart related questions • Analysing data from variety of graphs • Summarise data from graphs to answer questions • Apply mean, median and mode to given data • Make predictions • Draw conclusions	

15 – 19 November 2021

Week 6					
Day	**ATP Content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
31	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Describe the difference between ratio and rate Solve problems in context	Bk 1 No R7a (pp. xxiv & xxv) No R7b (pp. xxvi & xxvii)		
32	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Solve fraction problems in measurement	Bk 1 No R9 (pp. xxxii & xxxiii) R10 (pp. xxxiv & xxxv)		
33	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Solve problems in a financial context Solving money problems	Bk 1 No 55 (pp. 146 & 147) Bk 2 No. 73 (pp. 28 & 29)		
34	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	solve money problems solve problems in financial context. Calculating percentages working with money	Bk 2 No 74 (pp. 30 & 31) No. 90 (pp. 74 & 75)		

35	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Solving fraction problems in different contexts Solving fraction problems in measuring contexts/ capacity	Bk 1 No 48 (pp. 128 & 129) No 49 (pp. 130 & 131)		
36	Assessment Activity: Consolidate and revise – assess learners fraction understanding, remediate for understanding – use SM Activities				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Describe the difference between ratio and rate • Solve problems in context • Solve fraction problems in measurement • Solve problems in a financial context • Solving money problems • Calculating percentages working with money • Solving fraction problems in different contexts	What will you change next time? Why? **Struggling Learners Names:**
	HOD: **Date:**

22 – 26 November 2021

Week 7					
Day	**ATP Content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
37	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT NUMBER SENTENCES SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Using grouping and sharing to solve problems	Bk 1 No. 40a (pp. 108 & 109) No. 40b (pp. 110 & 111)		
38	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT NUMBER SENTENCES SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)–	Solving measurement problems using fractions	Bk 2 No. 102 (pp. 102 & 103)		

	comparing two quantities of different kinds (rate)				
39	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT NUMBER SENTENCES SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Solve rate problems Solve ratio problems	Bk 1 No. 41 (pp. 112 & 113) No. 42 (pp. 114 & 115)		
40	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT NUMBER SENTENCES SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Solving problems using ratio contexts Using proportional sharing	Bk 2 No. 113 (pp. 132 & 133) No. 114 (pp. 134 & 135) No. (pp. 152 & 153)		
41	USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT NUMBER SENTENCES SOLVING PROBLEMS- Solve problems in contexts involving whole numbers and fractions, including:– financial contexts– measurement contexts– fractions, including grouping and equal sharing– comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate)	Using fractions of whole numbers to solve problems	Bk 2 No. 120a (pp. 146 & 147) No. 120b (pp. 148 & 149)		
42	Complete and consolidate the week's assessment and work.				

Reflection

DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? WHAT ARE THEY ABLE TO MASTER: • Using grouping and sharing to solve problems • Solving measurement problems using fractions • Solve rate problems • Solve ratio problems • Solving problems using ratio contexts • Using proportional sharing • Using fractions of whole numbers to solve problems	What will you change next time? Why? **Struggling Learners Names:** **HOD:** **Date:**

29 November – 3 December 2021

Week 8					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
43	Consolidation assessment 1				
44	Remediation				
45	Consolidation assessment 2				
46	Remediation				
47	Consolidation assessment 3				
48	Remediation				
Reflection					
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? WHAT SKILLS ARE THEY ABLE TO MASTER?		What will you change next time? Why? Struggling Learners Names:			
		HOD:			**Date:**

6 – 10 December 2021

Week 9					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
49	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
50	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
51	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
52	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
53	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
54	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
Reflection					

	What will you change next time? Why?
	HOD: **Date:**

13 – 15 December 2021 (three-day week)

Week 10					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
55	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
56	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
57	FORMAL ASSESSMENT TASK TEST – term 3 and 4 concepts				
58					
59					
60					
Reflection					
Identify some skills that need revising during the next term in 2022		What will you change next time? Why? **Struggling Learners Names:**			

ASSESSMENT RATIONALE AND RESOURCES

Assessment Term Plan

The assessment term plan gives an overview of

1) how the formal and informal assessment programme fits into the weekly lesson plans.
2) How the skills mastery assessments fit into the weekly lesson plans

Note:

- There is ONE FORMAL Assessment tasks: 1) Test
- The Skills mastery assessments – aimed at consolidating, revising and remediating skills already covered this year - are added at the end of the document.

Written assessment tasks are to be selected and marked by teachers in appropriate lessons according to the lesson plans. Teachers may wish to group the items or use them individually.

Week	Skills Mastery Activities (Tuesdays and Thursdays)	Formative Assessment Activities: Aimed to enhance Revision Programme
1	Baseline Assessment	Baseline Assessment
2	**Tuesday** Skills mastery Assessment 1 **Thursday** Skills mastery Assessment 2	
3	**Tuesday** Skills mastery Assessment 3 **Thursday** Skills mastery Assessment 4	
4	**Tuesday** Skills mastery Assessment 5 **Thursday** Skills mastery Assessment 6	
5	**Tuesday** Skills mastery Assessment 7 **Thursday** Skills mastery Assessment 8	
6	**Tuesday** Skills mastery Assessment 9 **Thursday** Skills mastery Assessment 10	
7	**Tuesday** Skills mastery Assessment 11 **Thursday** Skills mastery Assessment 12	
8		**Lesson 1 and 2** Consolidation Assessment 1 plus Remediation **Lesson 3 and 4:** Consolidation Assessment 2 plus Remediation **Lesson 5 and 6** Consolidation Assessment 2 plus Remediation
9		FORMAL ASSESSMENT TASK – Test
10		**FORMAL ASSESSMENT TASK – Test**

Exemplar Written Assessment ITEMS with marking memos.

The exemplar items can be used as a diagnostic pre-assessment, but can be used, later in the term, as a post-assessment to monitor learning.

The skills mastery items can be used as a secondary assessment, both to monitor progress in learning skills and mastery of skills. For example, the teacher can select 5 items from the first three Skills Mastery Assessments (a selection from 15 items) and use it for end of week assessments. End-of-week days have been planned for this purpose, as well as for consolidating the learning of the week's content.

- Written assessments are to be done in addition to oral and practical assessment to carry out meaningful continuous assessment throughout the term.
- You need to plan when you will do a written assessment. We suggest you do it at the end-of week.
- The questions provided in the exemplar and Skills Mastery Assessments are taken from past written assessment papers and assessments generally, that were previously in the lesson plans. We suggest you use selected items as smaller written assessment tasks. This aligns better with the curriculum objective of continuous assessment.
- There is one lesson "slot" per week that is assigned for you to catch up or consolidate the lesson plan content covered in the week's lessons. This lesson should also be used for the purpose of carrying out written assessment tasks or to complete oral or practical tasks for that week.

ITEM BANK FOR BASELINE: EXEMPLAR

Surname:		
Name:	**Date:** _____	_____ 35
Date of birth:		

INSTRUCTIONS TO LEARNERS:

1. Answer all the questions in the spaces provided. Where asked for, full solutions must be given.
2. No calculators may be used.

Time: 30 minutes *Total: 35 marks*

SECTION 1: NUMBERS, OPERATIONS AND RELATIONSHIPS — 23 marks

1. a) Write in digits:

Two hundred and thirty-five million, six hundred and eight thousand and seven

_____

_____ (1)

b) Write in expanded notation: 214 007 340

_____

_____ (1)

2. Study these numbers:

393; 6 543; 2 709; 6 474; 58 058

a) Which numbers are divisible by 3?

_____

_____ (2)

b) Which number(s) are divisible by 6?

_____

_____ (1)

3. Write down the prime factors of 45.

_____

_____ (2)

4. Do the following calculations. Do **not** use a calculator and show all steps of the calculation.

a) 7 019 x 231

_____

_____

_____ (2)

b) 6 001 ÷ 124

_____

_____

_____

_____ (3)

5. a) Find the ratio of the number of pentagons to the number of octagons.

Write your answer in simplest form.

Pentagon 

Octagon 

_____

_____ (2)

b) A car travels at 60 km per hour. How far will the car travel in $\frac{1}{4}$ hour?

_____ (1)

6. a) How much bigger is the value of the first 5 than the value of the second 5 in the number 456 058?

_____

_____

_____ (2)

b) I have only 8 digits and each one is the same.

The number that follows me has 9 digits.

What number am I?

_____

_____

_____ (2)

7 Thembi and Thandi are twin sisters.

John and James are twin brothers.

The two girls are two years older than the two boys.

The sum of all their ages is 40.

How old is each of the children? Show all your working out.

_____

_____

_____

_____

_____

_____

_____

_____ (4)

SECTION 2: PATTERNS, FUNCTIONS AND ALGEBRA — 6 marks

8. Give the next two numbers in this sequence:

   61; 54; 47;_____;_____ (2)

9. Is the following number sentence true or false?

   If it is false, use brackets to make the number sentence true.

   8 + 4 x 5 = 60

   _____

   _____ (2)

10. A number is multiplied by 5 and is then increased by 27 to equal 62.

    What is the number? Show your working out.

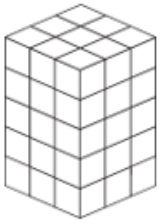
    _____

    _____

    _____

    _____ (2)

12. This 3-D object is made up of centimetre cubes.



(3)

a) How many faces, edges and vertices does this 3-D object have? (1)

   Faces: _____

   Edges: _____

   Vertices: _____

b) What is the geometric name of this 3-D object?

c) Calculate the volume of this 3-D object.

   _____

   _____

   _____

   _____

   _____

   _____

   _____ (1)

SOLUTIONS AND MEMORANDUM

Note: The last column in the memorandum shows the cognitive level for each question in the test. The levels are:

K	Knowledge: straight recall; use of mathematical facts and vocabulary; rounding off.
RP	Routine procedure: perform well known procedures; simple applications.
CP	Complex procedure: problems involving complex calculations and/or higher order reasoning.
PS	Problem solving: non-routine problems; higher order understanding and processes.
More information about these levels can be found in the CAPS (p. 296).	

Questions	Marks	Cognitive level
SECTION 1: NUMBERS, OPERATIONS AND RELATIONSHIPS		**23**
1. a) Two hundred and thirty-five million, six hundred and eight thousand and seven = 235 608 007 ✓	(1)	K
b) 214 007 340 = 200 000 000 + 10 000 000 + 4 000 000 + 7 000 + 300 + 40 ✓ OR 2 x 100 000 000 + 1 x 10 000 000 + 4 x 1 000 000 + 7 x 1 000 + 3 x 100 + 4 x 10 OR 2 hundred million + 10 million + 4 million + 7 thousand + 3 hundred + 4 ten	(1)	K
2. a) 393, 6 543, 2 709 and 6 474 are divisible by 3 All four numbers correct – 2 marks Three numbers correct – 1 mark Two numbers correct – 1 mark One number correct – 0 marks	(2)	K
b) 6 474 is divisible by 6 ✓	(1)	K

Questions	Marks	Cognitive level
3. 3 ✓ and 5 ✓ are prime factors of 45	(2)	K
4. a) 7 019 x 2 3 1 7 019 2 1 0 5 7 0 1 4 0 3 8 0 0 1 6 2 1 3 8 9 ✓ correct method So 7 019 x 231 = 1 621 389 ✓ OR 7 019 x 231 = (7 019 x 200) + (7 019 x 30) + (7 019 x 1) = 1 403 800 + 210 570 + 7 019 = 1 621 389 ✓ ✓ correct method OR 7 019 x 231 = (7 000 x 231) + (10 x 231) + (9 x 231) = 1 617 000 + 2 310 + 2 079 = 1 621 389 ✓ ✓ correct method	(2)	RP
b) 48 1 2 4 6 001 4 96 1 041 992 49 ✓ correct method So 6 000 ÷ 124 = 48 ✓ rem 49 ✓ 40 + 8 1246001 4960 1041 992 49 ✓ correct method So 6 000 ÷ 124 = 48 ✓ rem 49 ✓ 6 0 0 1 ÷ 124 − 6 0 0 1 / − 1 2 4 0 = 10 − 5 7 6 1 / − 1 2 4 0 = 10 − 5 7 6 1 / − 1 2 4 0 = 10 − 4 5 2 1 / − 1 2 4 0 = 10 − 3 2 8 1 / − 1 2 4 0 = 10 − 1 0 4 1 / − 6 2 0 = 5 − 4 2 1 / − 2 4 8 = 2 − 1 7 3 / − 1 2 4 = 1 4 9 = 49 ✓ correct method So 6 000 ÷ 124 = 48 ✓ remainder 49 ✓	(3)	RP CLUE BOARD 124 x 1 = 124 124 x 2 = 248 124 x 3 = 372 124 x 4 = 496 124 x 5 = 620 124 x 6 = 744 124 x 7 = 868 124 x 8 = 992

Questions	Marks	Cognitive level
5. a) The ratio of the number of pentagons to the number of octagons = 4 to 6 ✓ = 2 to 3 ✓	(2)	RP
b) The car will travel 15 km ✓	(1)	RP
6. a) 5 0 000 − 50 4 9 950 ✓ method and ✓ for correct answer The difference between the two 5s is 49 950	(2)	CP
b) The number is 99 999 999 ✓✓	(2)	PD

7. Boy + boy + (boy + 2) + (boy + 2) = 40 ✓✓ for a correct method
4 x boy's age = 36
∴ boy's age = 9 years
So the two boys are each 9 years ✓ old and the two girls are each 11 years ✓ old.

Questions	Marks	Cognitive level
SECTION 2: PATTERNS, FUNCTIONS AND ALGEBRA		6
8. 61 ; 54 ; 47 ; **40** ; **33** ✓	(2)	K
9. **FALSE** ✓ The correct sentence should be (8 + 4) x 5 = 60 ✓	(2)	RP
10. (□ x 5) + 27 = 62 □ x 5 = 35 ✓ for the correct working out So □ = 7 The number is 7 ✓	(2)	CP

Questions	Marks	Cognitive level
12 a) This 3-D object has **6** faces ✓, **12** edges ✓ and **8** vertices ✓	(3)	CP
b) Square prism or rectangular prism ✓	(1)	K
c) The volume of this 3-D object = 45 centimetre cubes ✓	(1)	RP
d) The surface area of this 3-D object	(2)	CP
= (4 x 15 cm squares) + (2 x 9 cm squares) ✓ = 60 cm squares + 18 cm squares = 78 cm squares ✓ ✓ for the correct method ✓ for the correct answer		

SKILLS MASTERY ASSESSMENTS

Rationale

- A Skills Mastery Assessment (SMA) is one in which there is an iterative revisiting of skills, topics, subjects or themes throughout the year.
- SMA is not simply the repetition of a topic taught. It requires the deepening of it, with each successive encounter building on the previous one.
- SMA is critical in today's educational environment, especially in mathematics, where we must consistently give our learners the opportunity to revisit and practice skills they have already learned aimed at mastery.
- The traditional practice is to incorporate consolidating, revising or reviewing, through homework, morning work, small group instruction, and even after school math classes. Through SMA we are going to continuously review skills and concepts with our students.
- It makes sense that we would continue to assess their understanding on those same skills by changing the context of the question using C-P-A-W (Concrete – Pictorial – Abstract -Worded)
- When we first teach and assess a skill, many of our students have yet to master it. By incorporating a SMA activity into your classroom, you are providing your students with the opportunity to demonstrate their growth and understanding on a regular basis.
- These regular SMAs help you see where your students are always struggling. You can use the results to guide your small group instruction and customize your lessons and activities to meet the needs of your students, not just the covering of curriculum.

Implementation

- In every lesson plan there are 10 minutes set aside for consolidation and revision, meaning one could apply SMA every day for 10 minutes, before teaching a new concept for that day.
- Each SMA is using a five-item design to ensure teachers can complete it in 10 minutes.
- As a minimum, this Planner and Tracker, recommends the use of Tuesdays and Fridays, but teachers could use every day.
- Each Tuesday and Thursday you are encouraged to take 10 minutes and give a SMA to the whole class, or groups. Learners should be able to take about 5 minutes to complete – then the teacher must remediate by addressing errors, misconceptions and misunderstandings.
- Teachers could also use the data from the SMA to help plan small group lessons for the next week.
- Teachers could also pull different students for different skills until the teacher felt confident that the learners were more confident in their responses. Then next week, repeat….new set of SMAs, similar skills being assessed, new data for small group instruction.
- These daily SMAs should be seen as a progress monitoring tool as well. This will prove to be effective in letting teachers know how their most struggling students are progressing.

SKILLS MASTERY SKILLS PER 5 – ITEM ASSESSMENT

SM Assessment 1	**Write the numbers in digits** **Place Value up to 1 million** **Prime numbers** **Use digits to make a 5-digit number** **Write the following in numbers**
SM Assessment 2	**List all factors of 24** **Round off to the nearest 10 and 100: 6-digit numbers** **Identify odd numbers** **Fill in the different number operations**
SM Assessment 3	**Identify shapes with straight and curved sides** **Place values and number sense** **Fill in missing numbers on a number line**
SM Assessment 4	**Add and subtract whole numbers up to millions** **Write numbers in words** **Rounding off** **Multiples of 2 and 4** **Multiples of 3 and 6** **Arrange these numbers from smallest to biggest**
SM Assessment 5	**Rounding off to the nearest five up to ten-thousands** **Add and subtract money amounts** **Fill in missing numbers in a table. Place Value** **Make largest number with one-digit number series**
SM Assessment 6	**Name the type of triangle** **Common fractions** **Decimal fractions** **Percentage**
SM Assessment 7	**State true or false: About division** **Divisibility rules** **Division patterns with zeroes** **Estimate products**
SM Assessment 8	**Find the next shape in a repeating pattern** **Complete a repeating pattern** **Make a repeating pattern** **Transformation**
SM Assessment 9	**Classify triangles** **Identify analogue time. Find missing angles in triangles and quadrilaterals**
SM Assessment 10	**Sort factors of expressions** **Identify equivalent expressions** **Place values in whole numbers** **Convert between place values**

SKILLS MASTERY EXEMPLARS

Number Assessment

1. **Write the numbers in digits.**

   1.1. two hundred and thirty-five thousand, six hundred and eleven

   _____

   1.2. eight hundred thousand, eight hundred and eighty-eight

   _____

2. **Give the values of the underlined digits.**

   2.1. 3<u>4</u>7 685 _____

   2.2. <u>8</u>04 967 _____

3. **Think about prime numbers.**

   3.1. What is a prime number?

   _____

   3.2. What is the only even prime number? _____

4. **Use any digits to make five different 9-digit numbers smaller than 999 999 999 but bigger than 500 000 000.**

   a. _____
   _____
   _____
   _____
   _____

5. **Write the following in numbers:**

   a. One million six hundred and thirty two thousand five hundred and eighty one.

   _____

SM Assessment 2

Number Assessment

1. **Round the numbers off to the nearest 10:**

a. 18 _____

b. 21 _____

c. 376 _____

2. List the factors of 24 in factor pairs.

_____

3. **Highlight the odd numbers.**

248 365 8 744 705 000 16 921

4.

42 ÷ 7 = _____	7 × _____ = 56	48 ÷ 4 × 6 = _____
_____ × 6 = 54	6 × 6 = _____	54 ÷ 9 = 30 ÷ _____

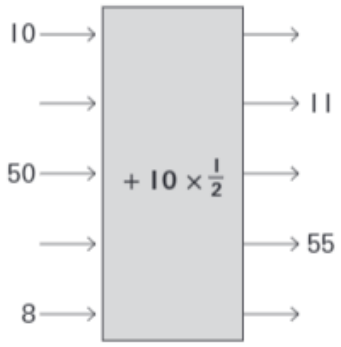
5. **Fill in +, −, × or ÷ to complete the rules in the flow diagrams.**

SM Assessment 3

Number Assessment

1. Colour the shapes that have straight and curved sides in green.

2. **Fill in the missing values.**



3. **Name the shapes according to the number of sides they have.**

_____

4. **Write the times as 24-hour times. Include the morning and evening times.**

_____

_____

5. Copy and complete each number line.

a.

SM Assessment 4

Number Assessment

1. Write these numbers in words.

a. 542 618 b. 214 037 c. 447 182

2. Round off

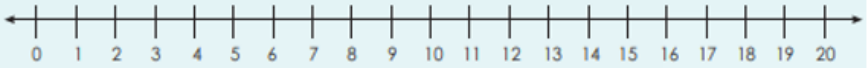
		ten	hundred	thousand
a.	92			
b.	348			
c.	2 871			

3.

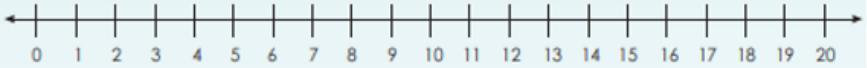
Number	x 100	x 200	x 300	x 400	x 500	x 600	x 700	x 800	x 900
100									
150									

4.

a. Multiples of 2 and 4.



b. Multiples of 3 and 6.



5.

Arrange these numbers from smallest to biggest.

Underline the even numbers in green.

a. 66 651; 65 561; 65 651; 66 156; 66 615

SM Assessment 5

Number Assessment

1. Compare these numbers. Write both numbers down and insert > < or =.

a. 155 645 * 155 654 b. 101 111 * 101 110 c. 773 575 * 773 575

2. Copy and complete the table by rounding off to the nearest 5, 10, 100 and 1 000.

Number	≈ 5	≈ 10	≈ 100	≈ 1 000
346 154	346 155	346 150	346 200	346 000
705 496				

3. **Write the following in expanded notation.** **Example:** 456 = 400 + 50 + 6

a. 678 _____ b. 937 _____

c. 1735 _____ d. 1 753 _____

4.

5.

$6\frac{1}{4} - 2\frac{2}{4}$

$= (5 + 1 + \frac{1}{4}) - (2 + \frac{2}{4})$

$= (5 + \frac{5}{4}) - (2 + \frac{2}{4})$

$= (5 - 2) + (\frac{5}{4} - \frac{2}{4})$

$= 3\frac{3}{4}$

e. $8\frac{3}{5} - 4\frac{4}{5}$

= _____

= _____

= _____

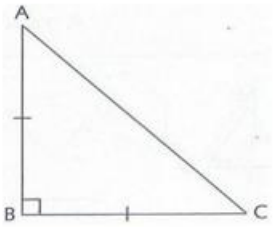
= _____

= _____

SM Assessment 6

Number Assessment

1.



Give the name of the above triangle.

_____

2.

Common Fraction	Decimal Fraction	Percentage
$\frac{1}{2}$	0,5	50%
$\frac{7}{10}$		

3.

Fill in <, > or = .

a. 85% ☐ 85%

b. $\frac{4}{10}$ ☐ 0,4

c. $\frac{4}{10}$ ☐ 40%

4.

Add the following.

a. $\frac{3}{6} + \frac{2}{6} =$ b. $\frac{3}{10} + \frac{5}{10} =$

5.

Fill in the missing information.

a. $\frac{1}{4}$ ☐ $\frac{1}{4} =$ ☐ b. ☐ $\frac{1}{5} = \frac{3}{5}$

SM Assessment 7

Number Assessment

1.

Say if the following is true or false:

a. All whole numbers that end in 0 or 5 are divisible by 10. ☐

2.

The next number in the **sequence** **3; 9; 27; …** will be …

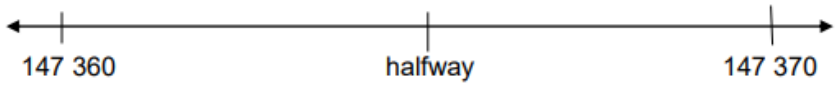
A 125.
B 36.
C 81.
D 30.

3.

Estimate and then calculate the following:

a. 2 500 ÷ 40 = ☐

4. Which number on a number line is **halfway** between 147 360 and 147 370?



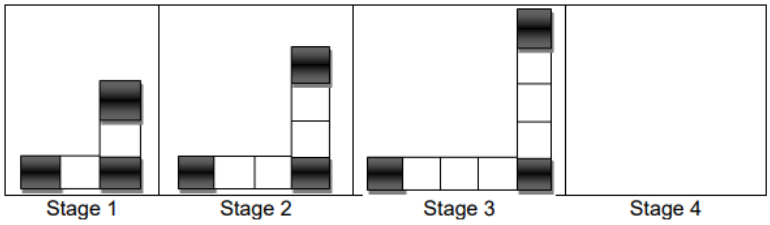
A 147 375
B 147 385
C 147 365
D 147 355

5. Farm workers picked 324 587 pears during the morning. After lunch they picked more pears. By the end of the day, they had 866 463 pears.

How many pears did they pick after lunch?

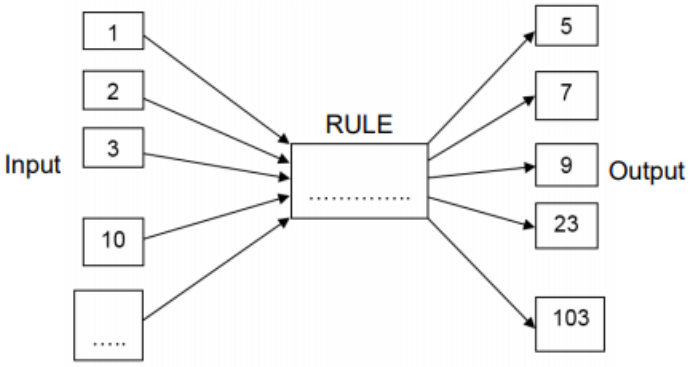
Number **SM Assessment 8**
Assessment

1. Look at the following pattern.



Draw stage 4 in the space provided.

2. Determine the rule in the following flow diagram.



3. 19 634 567 + 1 456 369 + 54 603 =...

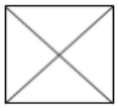
4. Two friends, John and Thabo, earned R400. Thabo worked for longer, so they agreed to share the money in the ratio 3:5.
How much money will each of them get?

SM Assessment 9

Number Assessment

1. Two diagonals bisect a square into triangles.

   What is the total number of triangles of different sizes?



_____

2. At which one of the following times will the two hands on an analogue watch form a straight line?

   A 12:30

   B 18:00

   C 14:40

   D 23:25

3. Which one of the following is NOT a quadrilateral?

   A rectangle

   B rhombus

   C square

   D kite

   E prism

4. **Calculate**:

   567,38 – 197,2

5. Complete the following sentence:

   2 kg of sugar has exactly the same mass as _____ g of sugar.

SM Assessment 10

Number Assessment

1. 

   Name the 3D object: _____

2. **Determine if the following expressions are equivalent to each other. Insert an = if they are the same and ≠ if they are not.**

   a. (2 + 5) x 3 ____ (2 x 3) + (5 x 3)

   b. 4 – 2 ____ 2 – 4

3. 30 x (40 + 50) = (30 x 40) + (30 x 50)

4. What is the value of a ?

825 × 100 = 100 × a a =

(350 + 250) + 10 000 = 350 + (250 + a) a =

5. Which number is 12 million **more than** 375 826 307?

A 363 826 307
B 253 826 307
C 387 826 307
D 375 946 195

SM Assessment 11

Number Assessment

1. What is the missing amount in the box in the following **number sentence** $\frac{\square}{12} = 3$?

A 4
B 36
C 15
D 8

2. Mary uses beads to make X pattern as in the following diagram. How may beads will she have in shape X2 and X3?

3. Write this time in **24-hour notation**. The time in the evening is …

4. Miss Mantewu's class has 48 learners. 36 of them are girls.
Which of the following is the **ratio** of boys to girls?

A 1 : 4
B 2 : 3
C 1 : 3
D 3 : 4

5. Calculate the following: $a = 1\,000$

a. $a + 50\,000 = 50\,000 + a$ =

b. $a \times 20 = 20 \times a$ =

SM Assessment 12

Number Assessment

1. Round 49 287 off to the **nearest 10 000**.

2. **Convert the following:**

a. 3 000 m = _____ km

b. 200 m = _____ km

3. Use the digits below to answer the following questions.

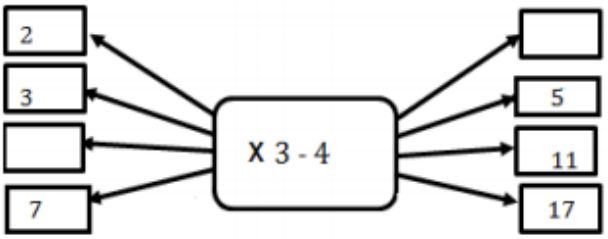
5 7 2 9

The biggest 4 digit number you can make is:

4. Order the following **decimal fractions** from the **biggest to the smallest.**

0,5; 0,050; 0,75; 0,570

5. Complete the flow diagram by filling in the missing numbers:



CONSOLIDATION (REVISION) ASSESSMENTS FOR END OF TERM

GRADE 6: 20 Item Consolidation Assessment 1 **TERM 3 & 4**

1. (2)

Write the numbers in digits.

1.1. two hundred and thirty-five thousand, six hundred and eleven

_____

1.2. eight hundred thousand, eight hundred and eighty-eight

_____

2. **Give the values of the underlined digits.** (4)

2.1. 3<u>4</u>7 685 _____

2.2. <u>8</u>04 967 _____

2.3. 279 <u>8</u>25 _____

2.4. <u>1</u> 486 397 _____

3. (2)

Think about prime numbers.

3.1. What is a prime number?

_____

3.2. What is the only even prime number? _____

4. (2)

Think about factors.

4.1. List the factors of 24 in factor pairs.

_____

4.2. List the factors of 36 in factor pairs.

_____

5. **Highlight the odd numbers.** (1)

248 365 8 744 705 000 16 921

6. **List the numbers in ascending order.** (2)

11,011 1,001 011,1 1,11 0,111 0,001 101,101

_____

7. (3)

7 × _____ = 56
6 × 6 = _____
108 ÷ _____ = 12

8. (1)

Fill in +, −, × or ÷ to complete the rules in the flow diagrams.

8.1.

11. **Name the shapes according to the number of sides they have.** (4)

11.1. 

_____

11.2. 

_____

12. (2)

Think about shapes.

12.1. If you draw a shape that has four right angles, what shape will you draw?

_____

13. **Write the times as 24-hour times. Include the morning and evening times.** (4)

13.1. 

_____

_____

13.2. 

_____

_____

14. **Write the times as digital times.** (3)

14.1. twenty-five past three in the afternoon _____

14.2. quarter to twelve in the evening _____

14.3. twenty-seven minutes later than twenty-five past five in the afternoon _____

15. What are the next two terms in the sequence: 11, 14, 17, 20, ___, ___, ... (1)

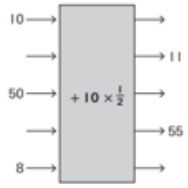
A 22, 25
B 23, 26
C 24, 27
D 25, 28

16. The lowest common multiple is: (1)

A the smallest number into which two numbers can divide.
B the largest number which divides perfectly into two numbers.
C the number with the least factors.
D the number with the most factors.

17. Write in expanded notation: $2^3 \times 5^4$ (1)

18. $\frac{7}{12} - \frac{5}{24}$ (1)

9.	**Fill in the missing values.** (5)  	19.	8 – (–3) (2)
10.	**Colour the shapes as indicated.** (3) 10.1. Colour the shapes that have only straight sides in blue. 10.2. Colour the shapes that have only curved sides in red. 10.3. Colour the shapes that have straight and curved sides in green. 	20.	The mode of a data set is the ____. (1) A mean number B middle number C most frequent number D maximum number
			TOTAL: 40 MARKS

MEMORANDUM

1.1. 235 611 (1)
1.2. 800 888 (1)

2.1. 40 000 (1)
2.2. 800 000 (1)
2.3. 800 (1)
2.4. 1 000 000 (1)
3.1. A prime number is any number that has only two factors, namely 1 and itself. (1)
3.2. 2 (1)

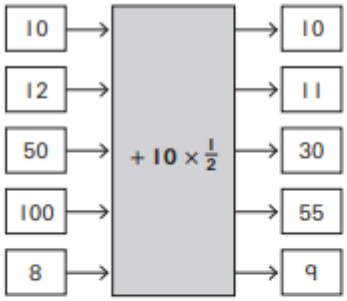
4.1. 1, 24 2, 12 3, 8 4, 6
4.2. 1, 36 2, 18 3, 12 4, 9 6, 6 (1)

5. 248 365 16 921 (1)
6. 0,001 0,111 1,001 1,11 11,011 011,1 101,101 (2)

7. (3)

8
36
9

8.1. × – (1)

9. 

(5)

10.1. Shapes 2 and 4 (1)
10.2. Shapes 1 and 5 (1)
10.3. Shape 3 (1)
11.1. triangle (1)
11.2. pentagon (1)

12.1. square or rectangle (1)

13.1. 10:15 22:15 (2)
13.2. 09:40 21:40 (2)
14.1. 15:25 (1)
14.2. 23:45 (1)
14.3. 17:52 (1)

15. B (1)

16. A (1)

17. $2 \times 2 \times 2 \times 5 \times 5 \times 5 \times 5$ ✓ (1)

18. $\frac{7}{12} - \frac{5}{24} = \frac{14-5}{24}$ (1)
$= \frac{9}{24}$
$= \frac{3}{8}$ ✓

19. $8 - (-3) = 11$ ✓ (1)

20. C (1)

1. Write the expressions using an exponent. Then solve.

a. $2 \times 2 \times 2 \times 2 \times 2$

b. five cubed

2. Round to the place of the underlined digit.

a. $6,29\underline{9},504 \approx$ _____

3. Write an expression.

a. 2 less than s

b. the quantity $7 + x$, squared

4. Evaluate the expressions when the value of the variable is given.

a. $40 - 8x$ when $x = 2$

b. $\frac{65}{p} - 3$ when $p = 5$

5. Multiply using the distributive property.

a. $7(x + 5) =$

b. $2(6p + 5) =$

6. A car is traveling with a constant speed of 80 kilometers per hour. Consider the variables of time (t), measured in hours, and the distance traveled (d), measured in kilometers.

a. Fill in the table.

t (hours)	0	1	2	3	4	5	6
d (km)							

11. Write as percentages, fractions, and decimals.

a. _____% = $\frac{35}{100}$ = _____

b. 9% = $\frac{\square}{\square}$ = _____

12. Find the prime factorization of the following numbers.

a. 45

/ \

13. Find the least common multiple of these pairs of numbers.

a. 2 and 8

14. Find the greatest common factor of the given number pairs.

a. 30 and 16

15. Write a division sentence, and solve.

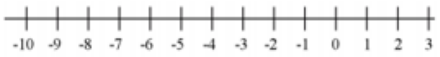
How many times does  go into  ?

16. Write a comparison to match each situation (with < or >).

a. The temperature −7°C is warmer than −12°C.

17. Draw a number line jump for each addition or subtraction sentence, and solve.

a. $-2 + 5 =$ _____



8. Write as fractions or mixed numbers.

a. 0.00078 **b.** 2.000302

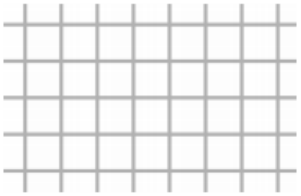
9. One brick is 215 mm long. How many of these bricks, put end to end, will cover a 5.15 meter wall?

10. **a.** It took 7 hours to mow four equal-size lawns. At that rate, how many lawns could be mowed in 35 hours? You can use the table below to help.

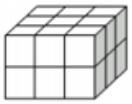
Lawns					
Hours					

18. Draw in the grid a right triangle with a base of 4 units and a height of 3 units.

Calculate its area.



19. The edges of each little cube measure **1/2 cm**. What is the total volume of these figures, in cubic units?



a.

MEMORANDUM

1. a. $2^5 = 32$ b. $5^3 = 125$

2. a. 6,300,000

3. a. $s - 2$ b. $(7 + x)^2$

4. a. $40 - 16 = 24$

b. $\frac{65}{5} = 13 \cdot 3 = 39$

5. a. $7(x + 5) = 7x + 35$
b. $2(6p + 5) = 12p + 10$

6.

t (hours)	0	1	2	3	4	5	6
d (km)	0	80	160	240	320	400	480

8. a. $\frac{78}{100,000}$ b. $2\frac{302}{1,000,000}$

9. a. Twenty-four bricks will cover the span of the wall. 5150 mm ÷ 215 mm = 23.953488.

10. a. You could mow 20 lawns in 35 hours.

Lawns	4	8	12	16	20
Hours	7	14	21	28	35

11. a. $35\% = \frac{35}{100} = 0.35$ b. $9\% = \frac{9}{100} = 0.09$

12. a. $3 \times 3 \times 5$

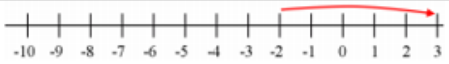
13. a. 8

14. a. 2

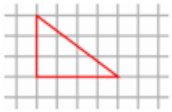
15. $3\frac{2}{3} \div \frac{3}{5} = 6\frac{1}{9}$

16. a. $-7°C > -12°C$.

17.



18.



The area is $4 \times 3 \div 2 = 6$ square units.

19. The volume of each little cube is (1/2 cm) × (1/2 cm) × (1/2 cm) = 1/8 cm^3.
a. 18 × (1/8) cm^3 = 18/8 cm^3 = 9/4 cm^3 = 2 1/4 cm^3.