vv

PLANNER & TRACKER FOR RECOVERY ANNUAL TEACHING PLAN (ATP)

2021 - 2023

MATHEMATICS

GRADE 5 TERM 2

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

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2030 NDP

- Please note that a Maths structured learning programme that includes daily lesson plans, big books, reading worksheets and classroom resources is available for download from www.nect.org.za
- This is a zero-rated website, so there are no data costs for downloads.
- This document can be used independently of the structured learning programme.

CONTENTS

ABOUT THE PLANNER AND TRACKER

This 2022 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 2022 Annual Teaching Plan including School-Based Assessments for Mathematics Grade 5.
2) To ensure that meaningful teaching continues during the remaining teaching time as per the school calendar for TERM 2.
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 2021 mathematics 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 doesn't bode well.

Curriculum coverage in 2022 must be viewed and implemented in term 2, in the light of some contextual realities that includes the following:

1) 2021 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 for most 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	10 January - 17 March	47 (10 weeks)
Term 2	**5 April – 24 June**	**53 (12 weeks) – 6 holidays**
Term 3	19 July – 30 September	54 (11 weeks) – 2 holidays
Term 4	11 October - 14 Dec	47 (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 2 Planner and Tracker has 53 teaching and learning days, of which 15 days are used for formative and summative Assessment days.
- NECT Term 2 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 5.
- 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 12 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 10.

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 2	Week 1 4 days	Week 2 5 days	Week 3 3 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 4 days	Week 11 5 days
Hours per week	5 hrs.	6 hrs.	3 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs.	6 hrs	5 hrs.	6 hrs.
Hours per topic	15 hrs			15 hrs.			9 hrs.	2 hrs.	6 hrs	5 hrs.	6 hrs.
Topics, concepts and skills	**WHOLE NUMBERS:** **Number range for calculations** • Multiplication of at least whole 3-digit by 2-digit numbers **Calculation techniques** • Using a range of techniques to perform and check written and mental calculations of whole numbers including: – estimation – building up and breaking down numbers – doubling and halving – using multiplication and division as inverse operations **Number range for multiples and factors** • Multiples of 2-digits whole numbers to at least 100 • Factors of 2-digit whole numbers to at least 100 **Properties of whole numbers** • Recognize and use the commutative; associative and distributive properties with whole numbers • 1 in terms of its multiplicative property **Solving problems** • Solve problems involving whole numbers, including – financial contexts – measurement contexts – comparing two or more quantities of the same kind (ratio) – comparing two quantities of different kinds (rate)			**WHOLE NUMBERS:** **Number range for calculations** • Division of at least whole 3-digit by 2-digit numbers **Calculation techniques** • Use a range of techniques to perform and check written and mental calculations with whole numbers including – estimation – building up and breaking down numbers – using multiplication and division as inverse operations **Properties of whole numbers** • Recognize and use the distributive properties of whole numbers • 1 in terms of its multiplicative property **Solving problems** • Solve problems in contexts involving whole numbers, including – financial contexts – measurement contexts – comparing two or more quantities of the same kind (ratio) – comparing two quantities of different kinds (rate) grouping and equal sharing with remainders			**NUMERIC PATTERNS:** **Investigate and extend patterns** • Investigate and extend numeric patterns looking for relationships or rules of patterns – sequences not limited to constant difference or ratio – of learner's own creation • Describe observed relationships or rules for sequences involving constant difference or ratio in learner's own words **Input and output values** Determine input values, output values and rules for patterns and relationships: – flow diagrams – tables **Equivalent forms** • Determine equivalence of different descriptions of the same relationship or rule presented: – verbally – in a flow diagram – by a number sentence	FORMAL ASSESSMENT TASKS **INVESTIGATIONS** • Multiplication • Division • Numeric Patterns	**GEOMETRIC PATTERNS** **Investigate and extend patterns** • Investigate and extend geometric patterns looking for relationships or rules of patterns: – represented in physical or diagram form – sequences not limited to a constant difference or ratio – of learner's own creation • Describe observed relationships or rules in learner's own words **Input and output values** • Determine input values, output values and rules for the patterns and relationships using flow diagrams **Equivalent forms** • Determine equivalence of different descriptions of the same relationship or rule presented: – verbally – in a flow diagram – by a number sentence	**REVISION**	FORMAL ASSESSMENT TASKS **TEST** All Term 1 and Term 2 topics

CORE QUESTIONS	DID ALL LEARNERS MASTER 2021 AND TERM 1 CORE 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 2: Implement DBE Baseline assessments or see exemplar in Planner and Tracker or any similar diagnostic – Based on 2021 Grade 4 and term 1 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. Teachers could also use week 1 to do revision from the DBE workbooks, as shown in the Planner and Tracker

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 5 = 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.

5 – 8 April 2022 (four-day week)

Week 1					
Lesson	**ATP Content**	**concepts, skills**	**DBE workbook 1**	**Resources**	**Date**
1	HOLIDAYS				
2	Revision: Diagnostic	Baseline: (Revision, consolidation of Term 1 and Grade 4 core skills)			
3	Revision: Remediation	Baseline: Remediation – error analysis			
4	WHOLE NUMBERS: **Number range for calculations:** -multiplication of at least whole 3-digit by 2 digit numbers. **Number range for multiples and factors** -Multiples of 2-digit whole numbers to at least 100 – factors of 2-digit whole numbers to at least 100.	Find multiples of 2, 3 & 4. Estimate the number of objects. Write times sums. Multiply 1-digit with 1-digit. Multiply by breaking down numbers. Multiply using algorithm.	No. R4a (pp. xiv, xv) No. R4b (pp. xvi, xvii)		
5	WHOLE NUMBERS: **Number range for calculations:** -multiplication of at least whole 3-digit by 2 digit numbers. **Number range for multiples and factors** -Multiples of 2-digit whole numbers to at least 100 – factors of 2-digit whole numbers to at least 100.	Know the meaning for division. Use words to help you describe division. Use the multiplication board and write division sums. Use factors to divide. Write a word problem and division sum from the prompt. Divide by breaking down the number	No. R5a (pp. xviii, xix) No. R5b (pp. xx, xxi)		
6	WHOLE NUMBERS **Solving problems**- Solve problems involving whole numbers, including – financial contexts – measurement contexts– comparing two or more quantities of the same kind **(ratio)** – comparing two quantities of different kinds **(rate)**	Describe ratio and rate. Give examples of rate and ratio. Solve real context problems. Write a statement using rate symbol.	No. R7a (pp. xxiv, xxv) No. R7b (pp. xxvi, xxvii)		

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: • Find multiples of 2, 3 & 4. • Estimate the number of objects. Write times sums. • Multiply by breaking down numbers. Multiply using algorithm. • Know the meaning for division. • Use words to help you describe division. • Use the multiplication board and write division sums. • Use factors to divide. • Write a word problem and division sum from the prompt. • Divide by breaking down the number • Describe ratio and rate. • Give examples of rate and ratio. Solve real context problems. • Write a statement using rate symbol.	What will you change next time? Why? **Struggling Learners Names:** **HOD:** **Date:**

11 – 14 April 2022 (four-day week)

Week 2					
Lesson	**ATP Content**	**concepts, skills**	**DBE workbook 1**	**Resources**	**Date**
7	WHOLE NUMBERS: **Number range for calculations:** -multiplication of at least whole 3-digit by 2 digit numbers. **Number range for multiples and factors** -Multiples of 2-digit whole numbers to at least 100 – factors of 2-digit whole numbers to at least 100.	Multiply 1-digit by 2-digits. Complete the multiplication grid. Describe the pattern shaded. Complete the flow diagram Use Multiples of 3, 4 & 5 to multiply.	No. 15a (pp. 42, 43) No. 15b (pp. 44, 45)		
8	WHOLE NUMBERS: **Number range for calculations:** -multiplication of at least whole 3-digit by 2 digit numbers. **Number range for multiples and factors** -Multiples of 2-digit whole numbers to at least 100 – factors of 2-digit whole numbers to at least 100.	Multiply 2-digits by 1-digit, 2-digits by 2-digits. Find multiples of 10, 100 and 1000. Multiply 3-digits by 2-digits Complete multiples patterns Multiply by multiples of ten	No. 16a (pp. 46) No. 17a (pp. 50)		
9	WHOLE NUMBERS **Calculation techniques**-Use a range of techniques to perform and check written and mental calculations of whole numbers including:– estimation– building up and breaking down numbers – doubling and halving – using multiplication and division as inverse operations.	Use distributive property. Use breaking down numbers. Apply the algorithm. Write down each step. Solve a real context problem. .	No. 16a (pp. 47) No. 16b (pp. 48, 49)		
10	WHOLE NUMBERS **Calculation techniques**-Use a range of techniques to perform and check written and mental calculations of whole numbers including:– estimation– building up and breaking down numbers – doubling and halving – using multiplication and division as inverse operations.	Use distributive property. Use breaking down numbers. Apply the algorithm. Write down each step. Solve a real context problem. .	No. 17a (pp. 51) No. 17b (pp. 52, 53)		
11	Assessment Activity: Consolidate and revise – assess learners understanding, remediate for understanding – use SM Activities				
12	PUBLIC HOLIDAY				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Multiply 1-digit by 2-digits. • Complete the multiplication grid. Describe the pattern shaded. • Complete the flow diagram • Use Multiples of 3, 4 & 5 to multiply. • Multiply 2-digits by 1-digit, 2-digits by 2-digits. • Find multiples of 10, 100 and 1000. Multiply 3-digits by 2-digits • Complete multiples patterns. Multiply by multiples of ten • Use distributive property. Use breaking down numbers. • Apply the algorithm. Write down each step.	What will you change next time? Why? **Struggling Learners Names?** **HOD:** **Date:**

19 – 22 April 2022 (four-day week)

Week 3					
Lesson	**ATP content**	**concepts, skills**	**DBE Workbook 1**	**Resources**	**Date**
13	PUBLIC HOLIDAY				
14	WHOLE NUMBERS **Solving problems**- Solve problems involving whole numbers, including – financial contexts – measurement contexts– comparing two or more quantities of the same kind **(ratio)** – comparing two quantities of different kinds **(rate) – grouping and equal sharing with remainders.**	Make equal groupings by moving objects. Write addition sums Write times sums. Use examples (blocks) to show thinking. Making groups equal and show the different sums.	No 18a (pp. 54, 55)		
15	WHOLE NUMBERS **Solving problems**- Solve problems involving whole numbers, including – financial contexts – measurement contexts– comparing two or more quantities of the same kind **(ratio)** – comparing two quantities of different kinds **(rate) – grouping and equal sharing with remainders.**	Show groups on a number line. Use the number lines to answer questions. Show equal sharing on the number line. Show equal sharing with remainders.	No 18b (pp. 56, 57)		
16	WHOLE NUMBERS: **Number range for calculations**-Division of at least whole 3-digit by 2-digit numbers **Calculation techniques -** Use a range of techniques to perform and check written and mental calculations with whole numbers including– estimation – building up and breaking down numbers – using multiplication and division as inverse operations	Using multiplication and division as inverse operations. Write inverse sums. Divide and test your answer by multiplying.	No. 19 (pp. 58, 59)		
17	WHOLE NUMBERS: **Number range for calculations**-Division of at least whole 3-digit by 2-digit numbers **Calculation techniques -** Use a range of techniques to perform and check written and mental calculations with whole numbers including– estimation – building up and breaking down numbers – using multiplication and division as inverse operations	Extend the patterns. Apply distributive property. Break down numbers. Apply times algorithm.	No. 44a (pp. 128, 129) No. 44b (pp. 130, 131)		
18	Assessment Activity: Consolidate and revise – assess learners understanding, remediate for understanding – use SM Activities				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Make equal groupings by moving objects. • Write addition sums. Write times sums. • Use examples (blocks) to show thinking. • Making groups equal and show the different sums. Show groups on a number line. • Use the number lines to answer questions. • Show equal sharing on the number line.	What will you change next time? Why? **Struggling Learners names:**

• Show equal sharing with remainders. • Using multiplication and division as inverse operations. • Write inverse sums. Divide and test your answer by multiplying. • Extend the patterns. • Apply distributive property. Break down numbers. • Apply times algorithm.	**HOD:** **Date:**

25 – 29 April 2022 (four-day week)

Week 4					
Lesson	**ATP Content**	**CAPS content, concepts, skills**	**DBE Workbook 1**	**Resources**	**Date**
19	WHOLE NUMBERS **Solving problems**-Solve problems in contexts involving whole numbers, including:– financial contexts– measurement contexts – comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds **(rate)** -grouping and equal sharing with remainders	Use the symbol for rate. Complete the table showing speed of car. Calculate distance and time.	No. 45 (pp. 132, 133)		
20	WHOLE NUMBERS **Number range for multiples and factors** -Multiples of 2-digits whole numbers to at least 100 - Factors of 2-digit whole numbers to at least 100	Identify patterns in tables Give multiples of any number.	No. 46 (pp. 134, 135)		
21	PUBLIC HOLIDAY				
22	WHOLE NUMBERS **Number range for multiples and factors** -Multiples of 2-digits whole numbers to at least 100 - Factors of 2-digit whole numbers to at least 100	Find factors using rectangular grids. Find factors of any number. Connect division with factor pairs.	No. 47 (pp. 136, 137)		
23	WHOLE NUMBERS: Properties of whole numbers- Recognize and use the **distributive properties** of whole numbers.	Explain distributive property using diagrams. Multiply using distributive property. Breaking down 2-digit numbers.	No. 48 (pp. 138, 139)		
24	Assessment Activity: Consolidate and revise – assess learners understanding, remediate for understanding – use SM Activities				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Use the symbol for rate. • Complete the table showing speed of car. • Calculate distance and time. Identify patterns in tables • Give multiples of any number. • Find factors using rectangular grids. • Find factors of any number. Connect division with factor pairs. • Explain distributive property using diagrams. • Multiply using distributive property. Breaking down 2-digit numbers.	What will you change next time? Why? **Struggling Learners Names**: **HOD:** **Date:**

3 – 6 May 2022 (four-day week)

Week 5					
Day	**ATP Content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
25	PUBLIC HOLIDAY				
26	WHOLE NUMBERS **Solving problems**-Solve problems in contexts involving whole numbers, including:– financial contexts– measurement contexts – comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate) -**grouping and equal sharing with remainders**	Make a set of numbers equal. Write down addition sums and times sums. Calculate groups of objects/numbers.	No. 59a (pp. 162, 163)		
27	WHOLE NUMBERS **Solving problems**-Solve problems in contexts involving whole numbers, including:– financial contexts– measurement contexts – comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate) -**grouping and equal sharing with remainders**	Divide a number and check using addition and times sums. Check divisibility by 2, 3, 4, 5, & 10. Write 5-digit numbers smaller than 20000 and divisible by 2, 3, 4, 5, 6, 8, 9 & 10.	No. 59b (pp. 164, 165)		
28	WHOLE NUMBERS **Solving problems**-Solve problems in contexts involving whole numbers, including:– financial contexts– measurement contexts – comparing two or more quantities of the same kind **(ratio**)– comparing two quantities of different kinds (rate) -grouping and equal sharing with remainders	Write ratios as fractions. Write ratios using the symbol. Write ratios using "to". Solve problems involving ratio.	No 60 (pp. 166, 167)		
29	WHOLE NUMBERS Calculation techniques-Use a range of techniques to perform and check written and mental calculations of whole numbers including:– estimation– building up and breaking down numbers – doubling and halving – using multiplication and division as inverse operations.	Describe the division patterns. Change times sums into division sums. Use grouping method to divide. Use long division algorithm.	No 61 (pp. 168, 169)		
30	Complete and consolidate the week's assessment and work. **FORMAL ASSESSMENT TASK**				

Reflection

DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Make a set of numbers equal. • Write down addition sums and times sums. • Calculate groups of objects/numbers. • Divide a number and check using addition and times sums. • Check divisibility by 2, 3, 4, 5, & 10. Write 5-digit numbers smaller than 20000 and divisible by 2, 3, 4, 5, 6, 8, 9 & 10. • Write ratios as fractions. • Write ratios using the symbol. • Write ratios using "to". Solve problems involving ratio. • Describe the division patterns. • Change times sums into division sums. • Use grouping method to divide. Use long division algorithm.	What will you change next time? Why? **Struggling Learners Names**: **HOD:** **Date:**

9 – 13 May 2022

Week 6					
Day	**ATP Content**	**concepts, skills**	**DBE workbook 1**	**Resources**	**Date**
31	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including:– financial contexts– measurement contexts – comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate) -**grouping and equal sharing with remainders**	Divide by 1-digit number and give remainder. Test answers using times sums. Divide by grouping and give remainder. Use long division and show remainder.	No. 62 (pp. 170, 171)		
32	WHOLE NUMBERS: **Number range for calculations**-Division of at least whole 3-digit by 2-digit numbers **Calculation techniques -** Use a range of techniques to perform and check written and mental calculations with whole numbers including– estimation – building up and breaking down numbers – using multiplication and division as inverse operations	Describe the rules of divisibility. Check divisibility by the given numbers. Complete the divisibility table.	No. 63 (pp. 172)		
33	WHOLE NUMBERS: **Number range for calculations**-Division of at least whole 3-digit by 2-digit numbers **Calculation techniques -** Use a range of techniques to perform and check written and mental calculations with whole numbers including– estimation – building up and breaking down numbers – using multiplication and division as inverse operations	Describe the rules of divisibility. Check divisibility by the given numbers. Complete the divisibility table.	No. 63 (pp. 173)		
34	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including:– financial contexts– measurement contexts – comparing two or more quantities of the same kind (ratio)– comparing two quantities of different kinds (rate) -grouping and equal sharing with remainders	Solve problems in context. Explain terminology for understanding division.	No. 64 (pp. 156, 157)		
35	Revision and consolidation of core concepts.				
36	Assessment activity: remediation of concepts which some learners have not fully understood				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? ARE THEY ABLE TO: • Divide by 1-digit number and give remainder. • Test answers using times sums. • Divide by grouping and give remainder. • Use long division and show remainder. • Describe the rules of divisibility. Check divisibility • Complete the divisibility table. Describe the rules of divisibility. • Solve problems in context. Explain terminology for understanding division.	What will you change next time? Why? **Struggling Learners Names:** **HOD:** **Date:**

16 – 20 May 2022

Week 7					
lesson	**ATP Content**	**concepts, skills**	**DBE workbook 1**	**Resources**	**Date**
37	NUMERIC PATTERNS**: Investigate and extend patterns** - Investigate and extend numeric patterns looking for relationships or rules of patterns – sequences involving a constant difference or ratio– of learner's own creation. Describe observed relationships or rules for sequences involving constant difference or ratio in learner's own words	Identify patterns. Extend patterns. Complete patterns.	No. R3a (pp. x, xi)		
38	NUMERIC PATTERNS**: Investigate and extend patterns** - Investigate and extend numeric patterns looking for relationships or rules of patterns – sequences involving a constant difference or ratio– of learner's own creation. Describe observed relationships or rules for sequences involving constant difference or ratio in learner's own words	Fill in missing numbers within a grid. Use the times board to multiply. Complete input/output tables.	No. 11 (pp. 34, 35)		
39	NUMERIC PATTERNS: **Input and output values**- Determine input values, output values and rules for patterns and relationships:– flow diagrams– tables. **Equivalent forms** - Determine equivalence of different descriptions of the same relationship or rule presented: – verbally– in a flow diagram – by a number sentence	Complete input/output table. Complete the flow diagram. Label tables and complete.	No. 12 (pp. 36, 37)		
40	NUMERIC PATTERNS: **Input and output values**- Determine input values, output values and rules for patterns and relationships:– flow diagrams– tables. **Equivalent forms** - Determine equivalence of different descriptions of the same relationship or rule presented: – verbally– in a flow diagram – by a number sentence	Extend patterns Complete the flow diagram with the rule. Identify the rule in the pattern. Identify patterns within a number grid.	No. 13 (pp. 38, 39)		
41	NUMERIC PATTERNS: **Input and output values**- Determine input values, output values and rules for patterns and relationships:– flow diagrams– tables. **Equivalent forms** - Determine equivalence of different descriptions of the same relationship or rule presented: – verbally– in a flow diagram – by a number sentence	Describe a pattern. Identify patterns and non-patterns. Complete the pattern in a diagram (circle). Make your own patterns.	No. 14 (pp. 40, 41)		
42	Assessment activity: remediation of concepts which some learners have not fully understood and enrichment cards for the learners who are on track				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? WHAT ARE THEY ABLE TO MASTER: • Identify patterns. Extend patterns. • Complete patterns. • Fill in missing numbers within a grid. • Use the times board to multiply. • Complete input/output tables. • Complete the flow diagram.	What will you change next time? Why? **Struggling Learners Names:** **HOD:** **Date:**

• Label tables and complete. • Extend patterns • Complete the flow diagram with the rule. • Identify the rule in the pattern. • Identify patterns within a number grid. • Describe a pattern. • Identify patterns and non-patterns. • Complete the pattern in a diagram (circle). • Make your own patterns.	

23 – 27 May 2022

Week 8					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
43	Revision: Catch-up on work not completed; remediation of concepts which weaker learners have not fully understood and enrichment cards for the learners who are on track				
44	Revision: Catch-up on work not completed; remediation of concepts which weaker learners have not fully understood and enrichment cards for the learners who are on track				
45	**ASSESSMENT TASK ASSIGNMENT** INVESTIGATIONS: Multiplication, Division & Numeric patterns.				
46	**ASSESSMENT TASK ASSIGNMENT** INVESTIGATIONS: Multiplication, Division & Numeric patterns.				
47	**ASSESSMENT TASK ASSIGNMENT** INVESTIGATIONS: Multiplication, Division & Numeric patterns.				
48	Revision and consolidation				

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:**

30 May – 3 June 2022

Week 9					
Day	**ATP content**	**concepts, skills**	**DBE workbook 1**	**Resources**	**Date**
49	GEOMETRIC PATTERNS **Investigate and extend patterns**- Investigate and extend geometric patterns looking for relationships or rules of patterns:– represented in physical or diagram form –	Identify growing patterns in shapes. Extend the geometric pattern. Draw the shape that completes the pattern.	No. 55 (pp. 152, 153)		

	sequences not limited to a constant difference or ratio – of learner's own creation. Describe observed relationships or rules in learner's own words				
50	GEOMETRIC PATTERNS **Investigate and extend patterns**- Investigate and extend geometric patterns looking for relationships or rules of patterns:– represented in physical or diagram form – sequences not limited to a constant difference or ratio – of learner's own creation. Describe observed relationships or rules in learner's own words	Investigate the pattern. Describe Pascal's Triangle. Find the different pattens in Pascal's triangle. Find the nth term or shape.	No. 56 (pp. 154)		
51	GEOMETRIC PATTERNS **Investigate and extend patterns**- Investigate and extend geometric patterns looking for relationships or rules of patterns:– represented in physical or diagram form – sequences not limited to a constant difference or ratio – of learner's own creation. Describe observed relationships or rules in learner's own words	Investigate the pattern. Describe Pascal's Triangle. Find the different pattens in Pascal's triangle. Find the nth term or shape.	No. 56 (pp. 155)		
52	GEOMETRIC PATTERNS **Input and output values** - Determine input values, output values and rules for the patterns and relationships using flow diagrams. **Equivalent forms** - Determine equivalence of different descriptions of the same relationship or rule presented: – verbally – in a flow diagram – by a number sentence	Investigate and compare patterns. Extend the geometric pattern. Complete the flow diagram. Complete the different shapes in the pattern. Complete the table showing number of matches needed.	No. 57 (pp. 156)		
53	GEOMETRIC PATTERNS **Input and output values** - Determine input values, output values and rules for the patterns and relationships using flow diagrams. **Equivalent forms** - Determine equivalence of different descriptions of the same relationship or rule presented: – verbally – in a flow diagram – by a number sentence	Complete the different shapes in the pattern. Complete the table showing number of matches needed.	No. 57 (pp. 157)		
54	Assessment activity: remediation of concepts which some learners have not fully understood				

Reflection

DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? WHAT SKILLS ARE THEY ABLE TO MASTER? • Identify growing patterns in shapes. • Extend the geometric pattern. • Draw the shape that completes the pattern. • Investigate the pattern. • Describe Pascal's Triangle. Find the different pattens in Pascal's triangle. • Find the nth term or shape. • Extend the geometric pattern. • Complete the flow diagram. • Complete the different shapes in the pattern. • Complete the table showing number of matches needed. • Investigate and compare patterns.	What will you change next time? Why? **HOD:** **Date:**

6 – 10 June 2022

Week 10					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
55	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including: – financial contexts – measurement contexts	Solve financial contexts. Identify coins and note. Calculate change.	No 32 (pp. 100, 101)		
56	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including: – financial contexts – measurement contexts	Solve financial contexts. Use principles of saving, buying & selling	No 33 (pp. 102, 103)		
57	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including: – financial contexts – measurement contexts	Solve measurement contexts. Measure capacity	No 24a (pp. 74, 75)		
58	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including: – financial contexts – measurement contexts	Solve measurement contexts. Measure capacity	No 24b (pp. 76, 77)		
59	WHOLE NUMBERS Solving problems-Solve problems in contexts involving whole numbers, including: – financial contexts – measurement contexts	Solve measurement contexts. Calculate time	No 20b (pp. 62, 63) No. 21 (pp. 64, 65)		
60	Assessment activity: remediation of concepts which some learners have not fully understood and enrichment cards for the learners who are on track				

Reflection	
DID ALL THE LEARNERS LEARN THE WEEKLY SKILLS? WHAT SKILLS ARE THEY ABLE TO MASTER? • Solve financial contexts. • Identify coins and note. • Calculate change. • Solve measurement contexts. • Measure capacity • Calculate time	What will you change next time? Why? **Struggling Learners Names:**

13 – 15 June 2022 (three-day week)

Week 11					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
61	**Revision of term 1 and 2:** Catch-up on work not completed; remediation of concepts which weaker learners have not fully understood and enrichment cards for the learners who are on track				

62	**Revision of term 1 and 2:** Catch-up on work not completed; remediation of concepts which weaker learners have not fully understood and enrichment cards for the learners who are on track				
63	**Revision of term 1 and 2:** Catch-up on work not completed; remediation of concepts which weaker learners have not fully understood and enrichment cards for the learners who are on track				
64	**Revision of term 1 and 2:** Catch-up on work not completed; remediation of concepts which weaker learners have not fully understood and enrichment cards for the learners who are on track				
65	PUBLIC HOLIDAY				
66	PUBLIC HOLIDAY				
Reflection					
	What will you change next time? Why? **Struggling Learners Names:**				

20 – 24 June 2022

Week 12					
Day	**ATP content**	**concepts, skills**	**DBE workbook**	**Resources**	**Date**
67	FORMAL ASSESSMENT TASK Test All topics				
68	FORMAL ASSESSMENT TASK Test All topics				
69	FORMAL ASSESSMENT TASK Test All topics				
70	FORMAL ASSESSMENT TASK Test All topics				
71	FORMAL ASSESSMENT TASK Test All topics				
72	END OF TERM				
Reflection					
	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 are two FORMAL Assessment tasks: 1) Assignment and 2) Test on all topics.
- The Skills mastery assessments – aimed at consolidating, revising and remediating skills covered last 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 their 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	**Tuesday** Skills mastery Assessment 13 **Thursday** Skills mastery Assessment 14	**Formal Assessment Task:** **Assignment**
9	**Tuesday** Skills mastery Assessment 15 **Thursday**	

	Skills mastery Assessment 16	
10	**Tuesday** Skills mastery Assessment 17 **Thursday** Skills mastery Assessment 18	
11	**Tuesday** Skills mastery Assessment 19	
12		**FORMAL ASSESSMENT TASK – Test on all topics**

Exemplar Written Baseline Assessment ITEMS with marking memos.

The exemplar items can be used as a baseline 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 formative 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 formative assessments is to be done in addition to oral and practical assessment to carry out meaningful continuous assessment throughout the term, aimed at learning skills
- You need to plan when you will do a written formative 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 ASSESSMENT: EXEMPLAR

Surname:	_____	
Name:	**Boy** **Girl**	
Date of birth:	_____	
School:		
Province:		_____
EMIS no.:	**Date:** _____	

INSTRUCTIONS TO LEARNERS:

1. Time: 60 minutes.
2. Answer all the questions in the spaces provided.
3. No calculators may be used.

SECTION 1: Mental Mathematics	
1.	200 + 500 = _____
2.	300 ÷ 100 = _____
3.	12 x 5 = _____
4.	9 x 400 = _____
5.	1 799 + 1 = _____
6.	800 ÷ 800 = _____
7.	2 600 + 1 400 = _____
8.	(100 ÷ 100) + 1 = _____
9.	2 x 3 x 2 = _____
10.	1 999 m – 1 000 m = _____

(10)

11. Addition with 5 digit numbers

33 469 + 21 473 =

(3)

12. Subtraction with 5 digit numbers

89 534 – 54 367 =

(3)

13. Multiplication: 3-digit by 2-digit numbers

645 x 28 =

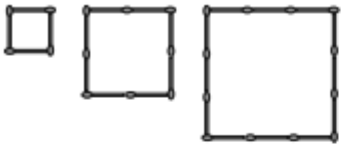
(3)

14. Division: 3-digit by 2-digit numbers

988 ÷ 38 =

(3)

15. Use the growing pattern to complete the table:



1 2 3

Number of square	1	2	3	4	5
Number of match sticks	4	8	12		

(2)

16. How many match sticks will be in square 10? _____ (1)

17. What is the rule? _____

_____ (1)

18. You build steps out of cubes.

- 1 step uses 1 cube
- 2 steps uses 3 cubes
- 3 steps uses 6 cubes

How many cubes will it take to build a staircase that is **5 steps** high?

_____ (2)

SOLUTIONS AND MEMORANDUM

Questions	Marks	Content area	Cognitive level
SECTION 1: Mental mathematics			
1. 700 ✓	(1)	**1**	K
2. 3 ✓	(1)	**1**	K
3. 60 ✓	(1)	**1**	K
4. 3 600 ✓	(1)	**1**	K
5. 1 800 ✓	(1)	**1**	K

Questions	Marks	Content area	Cognitive level
6. 1 ✓	(1)	**1**	RP
7. 4 000 ✓	(1)	**1**	RP
8. 2 ✓	(1)	**1**	RP
9. 12 ✓	(1)	**1**	RP
10. 999 m ✓	(1)	**1**	RP

11.

33 469 + 21 473 = _____ • Please note learners may use **ANY** method • 1 mark for the working out and 2 marks for the correct answer 30 000 + 3 000 + 400 + 60 + 9 + 20 000 + 1 000 + 400 + 70 + 3 = 50 000 + 4 000 + 800 + 130 + 12 ✓ = 54 942 ✓✓ **Or** **33 469 + 21 473** = (30 000 + 3 000 + 400 + 60 + 9) + (20 000 + 1 000 + 400 + 70 + 3) ✓ = (30 000 + 20 000) + (3 000 + 1 000) + (400 + 400) + (60 + 70) + (9 + 3) = 50 000 + 4 000 + 800 + 130 + 12 = 54 942 ✓✓	(3)	**1**	RP

12.

89 534 – 54 367 = _____ • Please note learners may use **ANY** method • 1 mark for working out and 2 marks for the correct answer 89 534 = 80 000 + 9 000 + $^{400}500$ + $^{120}30$ + $^{14}4$ ✓ – 54 367 = 50 000 + 4 000 + 300 + 60 + 7 = 30 000 + 5 000 + 100 + 60 + 7 = 35 167 ✓✓ **Or** 89 534 – 54 367 = (80 000 + 9 000 + 500 + 30 + 4) – (50 000 + 4 000 + 300 + 70 + 6) = (80 000 – 50 000) + (9 000 – 4 000) + (500 – 300) + (34 – 67) = 30 000 + 5 000 + 200 + 34 – 67 = 35 000 + 100 + 134 – 67 ✓ = 35 100 + 67 = 35 167 ✓✓	(3)	**1**	RP

13.

645 x 28 =_____ • Please note learners can use **ANY** method • 2 marks for working out and 1 mark for the correct answer 645 x 28 = 645 x 2 x 2 x 7 = 1 290 x 2 x 7 = 2 580 x 7 = (2 000 x 7) + (500 x 7) + (80 x 7) ✓ = 14 000 + 3 500 + 560 ✓ = 18 060 ✓ **Or** 645 x 28 = (8 x 645) + (20 x 645) ✓ = 5 160 + 12 900 ✓ = 18 060 ✓	(3)	**1**	CP

14.

988 ÷ 38

- Please note learners can use **ANY** method
- 2 marks for working out and 1 mark for the correct answer

Multiply 38	Subtract the multiplication to find the difference
20 x 38 = 760	988 – 760 = 228 ✓
5 x 38 = 190	228 – 190 = 38 ✓
1 x 38 = 38	38 – 38 = 0

988 ÷ 38 = 20 + 5 + 1 = 26 ✓

Or

Clue Board

3	8	x	**1**		=		3	8
3	8	x	**2**		=		7	6
3	8	x	**1**	**0**	=	3	8	0
3	8	x	**5**		=	1	9	0

✓

						9	8	8
3	8	x	1	0	=	3	8	0
						6	0	8
3	8	x	1	0	=	3	8	0
						2	2	8
3	8	x	5		=	1	9	0
							3	8
3	8	x	1		=		3	8
								0

✓

So 988 ÷ 38 = 10 + 10 + 5 + 1 = 26 ✓

(3) **1** CP

15.

Number of square	1	2	3	4	5
Number of match sticks	4	8	12	**16**	**20**

✓✓

(2) **2** RP

16. 40 match sticks ✓ (1) **2** CP

17. To get the number of matches in a square, multiply the number of the square by 4 ✓ (1) **2** CP

18.

Step number	Number of cubes
1	1
2	2 + 1 = 3
3	3 + 2 + 1 = 6
4	4 + 3 + 2 + 1 = 10
5	5 + 4 + 3 + 2 + 1 = 15

It will take 15 cubes ✓✓

(2) **2** CP

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 EXEMPLARS

Skills Mastery (SM) Assessment 1

Number

Assessment

1.

Build a 6-digit number from the parts

Write the 6-digit numbers

1. _____ 100,000 + 30,000 + 3,000 + 600 + 4

2. _____ 900,000 + 30,000 + 7,000 + 900 + 20 + 1

2.

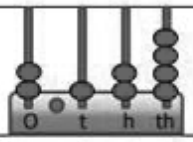
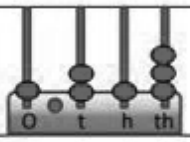
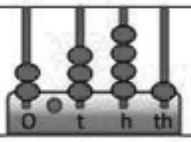
Round numbers 0-1,000,000 to the nearest 1,000

Round to the nearest thousand.

1. 777,973 = _____ 2. 18,591 = _____ 3. 3,383 = _____

3.

Use the abacus to work out the numbers shown.

1)	2)	3)
		
= 2.124		

4.

Select the correct answer from a choice of 8 possibilities.

I am less than 1.

My tenths digit is less than 7.

If you multiply me by 100, you get an odd number.

I am nearer to zero than to 1.

Who am I?

0.36	1.24	0.8	0.47
0.53	0.08	1.07	0.6

5.

C) Choose a different number from this list each time to write in the missing spaces

4.75	*6.8*	*9.03*	*2.9*	*0.38*	*5.17*	*0.63*	*12.7*

1) _____ x 10 is between 50 and 60 Actual value _____

2) 100 x _____ is between 60 and 70 Actual value _____

3) 10 x _____ is between 80 and 100 Actual value _____

4) _____ x 100 is between 300 and 500 Actual value _____

SM ASSESSMENT 2

1. Which pair continues the pattern?

5	7	9	
10	14	18	

A. (10, 22)
B. (11, 22)
C. (20, 10)
D. (11, 20)

2. Which number sentence shows the Commutative Property of Addition?

A. $5 + 3 = 8$
B. $5 + 3 = 5 + 3$
C. $5 + 3 = 3 + 5$
D. $(5 + 3) + 2 = 5 + (3 + 2)$

3. Which is the expanded form of 2,084?

A. $200 + 80 + 4$
B. $200 + 80 + 40$
C. $2{,}000 + 80 + 4$
D. $2{,}000 + 800 + 4$

4.

Mental math: missing numbers (4 digit numbers)

Find the missing number.

1. 383 + _____ = 1,170

2. 1,798 + _____ = 2,661

5.

Fill in < or >.

a. 9 248 ☐ 9 284

b. 10 320 ☐ 10 230

c. 11 121 ☐ 11 112

d. 12 041 ☐ 12 401

SM Assessment 3

Number Assessment

1. **Write the number 17 904 in words.**

   A. Seventy one thousand, four hundred and ninety

   B. Seventy million, nine hundred and four thousand

   C. Seventeen thousand, nine hundred and forty

   D. Seventeen thousand, nine hundred and four

2. **Use each of the following digits once, to form the biggest possible number.**

   2 ; 1 ; 6 ; 4 ; 3

   A. 61 432

   B. 46 231

   C. 63 124

   D. 64 321

3. **Which number sentence is wrong?**

   A. $(2 + 5) \times 1 = 2 + (5 \times 1)$

   B. $(1 + 3) + 4 = 1 + (3 \times 4)$

   C. $3 \times 1 - 2 = 13 \times 1 - 12$

   D. $12 \times 1 = 1 \times 12$

4. **What is the number?**
   12 000 + 9 200 + 12 =

   .....

5. **Indicate if the following is True or False**

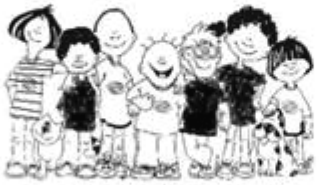
   a) $8 \times 4 + 9 = 4 + 9 \times 8$ .....

   b) $4(5 + 6) = (4 \times 5) + (4 \times 6)$ .....

SM Assessment 4

Number Assessment

1. **A fraction of the group of learners below wear dark t-shirts. What fraction do they represent?**



A $\frac{3}{4}$ B $\frac{4}{7}$ C $\frac{3}{7}$ D $\frac{7}{3}$ [1]

2. **Each participant in a race receives a card with a number on it. Study the cards below and look at the pattern of the numbers. If the pattern continues, what will the next number on the card be?**

A. 95

B. 90

C. 93

D. 97 [1]

3. **One number in this pattern is wrong. With which number must it be replaced?**

22	26	30	36	38	42

A. Replace 26 met 24

B. Replace 26 met 28

C. Replace 36 met 34

D. Replace 42 met 40

4. **John uses matches to build the following geometric shapes:**

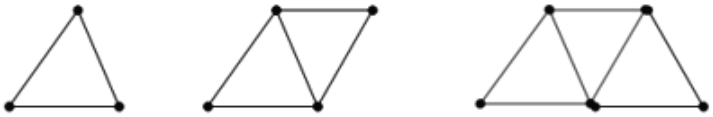


Figure 1 Figure 2 Figure 3

a) **Complete the table :** [2]

Number of triangles	1	2	3	6	.....
Number of matches	3	5	7	.....	19

5. **Complete the pattern.**

14:00 ; 14:30 ; ☐ ; 15:30 ; 16:00

A. 13:00

B. 13:30

C. 14:30

D. 15:00

SM ASSESSMENT 4

1. Which of the following numbers are factors of 45?

A. 5, 10, 15, 20

B. 3, 5, 9, 15

C. 5, 15, 25, 45

D. 45, 90, 135, 180

2. Which number goes with 5 in the following pattern?

2	10
3	15
4	20
5	?

A. 20
B. 25
C. 30
D. 35

3. Which number is NOT divisible by 5?

A. 845
B. 3270
C. 45,051
D. 1,039,865

4. **Complete the following:**

a. Use each digit once, make the smallest 5-digit number: _____

5. **Round the following numbers off to the nearest 5.**

10	11	12	13	14	15	16	17	18	19	20

a. **12.** Is it closer to 10 or 15? _____ **12** ≈ _____

b. **14.** Is it closer to 10 or _____ ? _____ **14** ≈ _____

SM Assessment 6

Number Assessment

1. 69 157 – 17 239

2. $421 \div 20$

3. Write a correct sign > ; < or =

$\frac{1}{2}$ _____ $\frac{1}{9}$

4. **Colour the combination that will give you:**

a. **R2** — R1 R50 R2 R1 R5 R1

b. **R1** — R0,50 R0,50 R0,20 R0,20 R0,20 R0,10

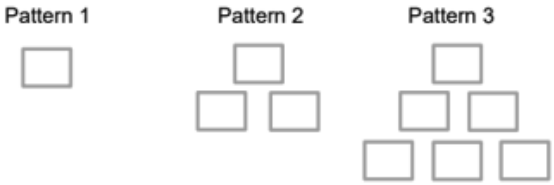
c. **R5** — R0,50 R2 R1 R0,50 R0,50 R2 R0,50

5. Donna brought 2 baseball cards to school on Monday. Each day during that week, she brought twice as many baseball cards as the day before. How many baseball cards did Donna bring to school on Friday?

A. 4
B. 10
C. 16
D. 32

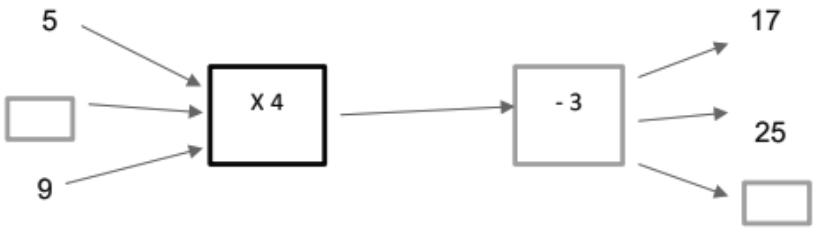
SM ASSESSMENT 7

2.



Pattern	1	2	3	4	i)_____	8
Number of squares	1	3	6	ii)_____	15	36

3.



4. Michelle's mother has saved R41 550 for a house. Sindi's mother has saved R12 950 more than Michelle's mother.

How much money has Sindi's mother save?

_____

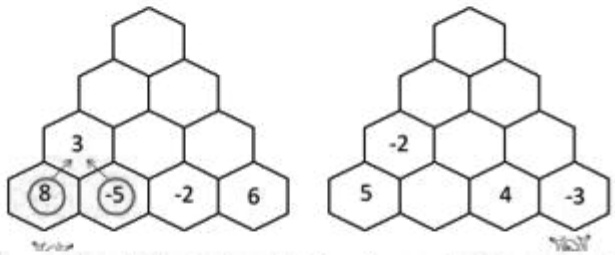
_____

_____

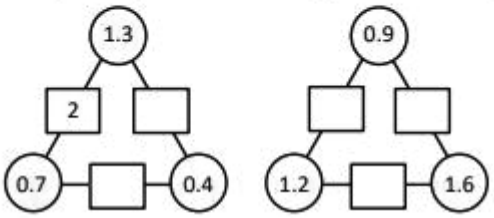
SM Assessment 8

Number Assessment

1. Each hexagon is made by adding up the numbers in the two hexagons below it. Fill in the missing numbers in these puzzles.



2. The numbers in the circles added together makes the number in the linking rectangle. Find the missing numbers in this puzzle.



3. What part of each strip is coloured?

(a) 

(b) 

4. **Divide whole numbers by 10, 100 or 1000**

4 ÷ 100 = _____

592 ÷ 1000 = _____

SM ASSESSMENT 9

1. Which number belongs in the box?

$\square - 7 = 23$

A. 15
B. 16
C. 30
D. 31

2. There are 54 red and blue balls in a box. If 22 of the balls are red, which shows how to find the number of blue balls?

A. $54 + 22$
B. $54 - 22$
C. 54×22
D. $54 \div 22$

3. **Greatest common factor (GCF)**

1. 12 _____ ___ 2. 30 _____ ___
26 _____ 40 _____

4. **Lowest common multiple (LCM)**

Find the lowest common multiple.

1. 4 _____ ____ 2. 6 _____ ____
22 _____ 24 _____

5. **Division by whole tens with remainder**

Find the quotient with remainder.

1. 903 ÷ 20 = _____ 2. 294 ÷ 60 = _____

SM Assessment 10

Number Assessment

1. **1. Complete the table below.**

Number	x 10	x 20	x 30	x 40	x 50	x 60	x 70	x 80	x 90
8									
10									

2. **These are multiples of (extend the pattern):**

a. **20:** 60, 80, 100, 120, ____ ____ ____ ____ ____

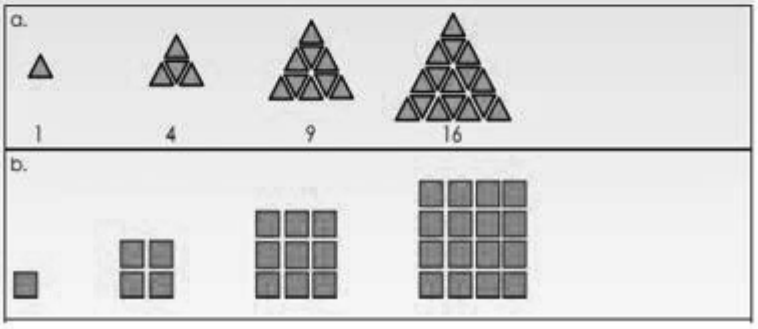
b. **50:** 150, 200, 250, 300, ____ ____ ____ ____ ____

3. **1. Round the following off to the nearest ten.**

a. 13 ____ b. 42 ____ c. 35 ____

d. 54 ____ e. 21 ____ f. 79 ____

4. **1. Extend the geometric pattern and write it as a number pattern.**



SM Assessment 11

Number Assessment

1. ## Divisibility rules

How do you know if a number is divisible by the following numbers? Write the rule and give an example.

Number	Rule
2	
3	

2. ## Writing exponents

$5 \times 5 \times 5 \times 5$

$10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$

3. **Mixed operations word problems**

During a normal day, there are 280 planes taking off from the airport, but the airport is a lot busier during Christmas. During the Christmas holidays, about 336 planes take off every day from the airport.

During the Christmas holidays, the airport opens 12 hours during each day, how many planes take off from this airport in each hour?

4. **1. Complete the sentences and round the numbers off to the nearest ten using the number lines.**

a. 56 is closer to 60 than 50. So 56 rounded off to the nearest **ten** is ____

b. 136 is closer to ____ than ____. So 136 rounded off to the nearest **ten** is ____

5. **1. Subtract the following:**

a. 60 – 20 = ____ b. 5 – 2 = ____ c. 800 – 400 = ____

d. 600 – 400 = ____ e. 9 000 – 3 000 = ____ f. 700 – 100 = ____

SM Assessment 12

Number Assessment

1. **1. Complete the table below.**

Number	x 100	x 200	x 300	x 400	x 5 00	x 600	x 700	x 800	x 900
15									
30									

2. **These are multiples of (extend the pattern).**

a. **500:** 2 500, 3 000, 3 500, 4 000, ____ ____ ____ ____ ____

b. **1 000:** 10 000, 11 000, 12 000, 13 000, ____ ____ ____ ____ ____

3. **Arrange the numbers from the smallest to the biggest.**

a. 1 231 , 1 213 , 1 312 , 1 132 , 1 123, ____

b.1 945 , 1 549 , 1 559 , 1 954 , 1 459 , ____

4. **Complete the tables.**

a.

	Find the multiples of the whole number 3							
Multiplication:	1 x 3	2 x 3	3 x 3					
Multiples of 3:	3	6	9					
Solution:	The multiples of 3 are: _____							

5. **Calculate the following.**

Example 1:

3 x (2 + 4)
= 6 + 12
= 18

Example 2:

x	3
2	6
4	12

= 6 + 12
= 18

a. 4 x (8 + 2) =

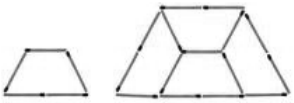
b. 2 x (2 + 8) =

SM Assessment 13

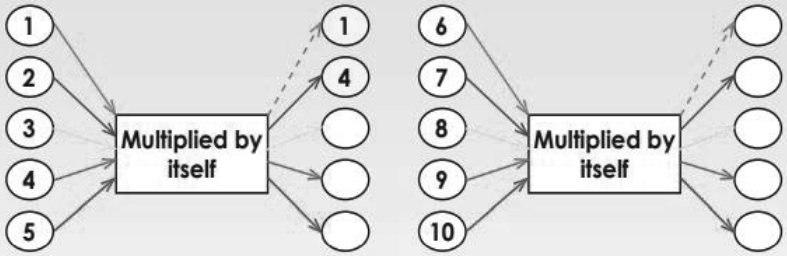
Number Assessment

1. **Draw the next pattern.**

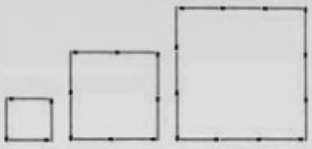
a.



2. **Complete the flow diagram based on the pattern above.**



3.



b. Name of pattern: _____

Square pattern number	1	2	3	4	5	6	7	8	9	10
Number of matches										

4. Cherie has a rock collection. She gave 6 rocks to Tommy for his birthday. She traded 3 rocks to Sally for marbles. Cherie now has 15 rocks left. How many did she start with?

A. 6
B. 9
C. 15
D. 24

5. **Calculate the following:**

a. Share 16 000 between 4. _____

SM Assessment 14

Number Assessment

1. **Answer true or false.**

a. 19 754 is divisible by 2. _____ b. 7 985 is divisible by 5. _____

c. 14 578 is divisible by 3. _____ d. 2 832 is divisible by 4. _____

2. **Complete the table below. The first one has been done for you.**

_____ is divisible by:	Circle the correct number (s).
a. 120	(2) (3) (4) (5) (6) (8) 9 (10)
b. 175	2 3 4 5 6 8 9 10

3. **1. Show the multiples on the number lines.**

2: 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

3: 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

4. **Test the answers of the first three sums above.**

a. 13 ÷ 6 =

13 ÷ 6 = 2 rem 1

Test
2 x 6 + 1
= 12 + 1
= 13

b. 57 ÷ 2 =

c. 48 ÷ 9 =

5. **Are the following numbers divisible by 3. Show your workings.**

Example: 2 079

- Add the digits: 2 + 0 + 7 + 9 = 18
- 18 is a multiple of 3
- So 2 079 is divisible by 3

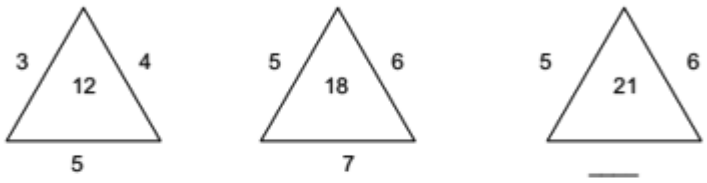
a. 345 _____

b. 651 _____

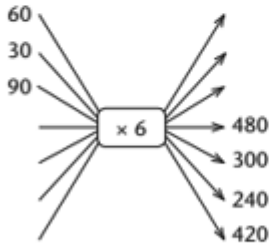
SM Assessment 15

Number Assessment

1. Fill in the missing number in the third diagram.



2.



3.

Number	20	40	80				
Number × 7				490	210	700	350

4. **Represent, order and compare numbers**

Which numbers are missing on the number lines below?
Write them in the correct order in your book.

(a) 1000 2000 ... 9000

(b) 3800 3900 ... 4700

5. **Practise addition and subtraction**

First estimate the answers to the nearest thousand.
Then calculate the answers.

(a) 3 467 + 5 231 (b) 4 736 + 3 263

SM ASSESSMENT 16

1. Which is the same as 4 × 7?

A. 47
B. 4 + 7
C. 7 + 7 + 7 + 7
D. 74

2. **How much money will I have if I save the following amounts?**

a. R2 + R1 + R5 + R20 = _____

3. a. 2 392 + 1 476

4. 4 500 ; 4 625 ; 4 750 ; 4 875 ; _____ ; 5 125.

The missing number in the above number sequence is:

A 4 975

B 5 000

C 5 050

D 5 025 (1)

5. Which number consists of the following:

6H + 4Th + 2T + 9Tth + 5U?

A 49 625

B 94 265

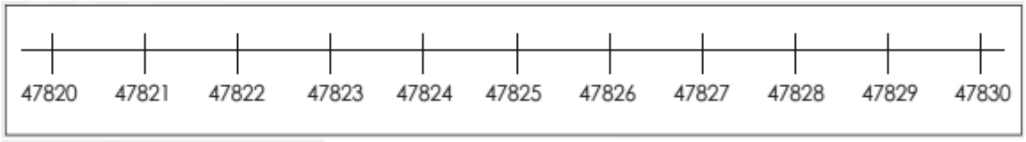
C 94 562

D 94 625 (1)

SM Assessment 17

Number Assessment

1. **Use the number line to round off the numbers to the nearest 5.**



a. 47 826 ≈ _____

b. 47 829 ≈ _____

2. **148.** Is it closer to _____ or _____ ? _____ **148** ≈ _____

3. **Build a 6-digit number (with decimals)**

Write the 6-digit numbers

1. _____ 500,000 + 10,000 + 6,000 + 300

2. _____ 6,000 + 400 + 70 + 9 + 0.6 + 0.08

4. **Subtracting large numbers in columns**

Find the difference.

1.
```
  57,644,196
- 49,732,152
-------------
```

5. Complete:

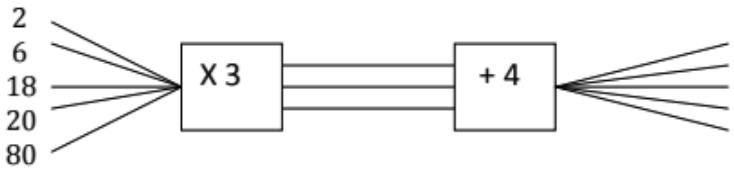
2.1 33 754 rounded off to the nearest 5 ≈ _____ (1)

2.2 99 999 rounded off to the nearest 1 000 ≈ _____ (1)

SM ASSESSMENT 18

Number Assessment

1.



Inset value	2	6	18	20	80
Outset value	**10**	(6.1)	(6.2)	**64**	(6.3)

6.1 _____ 6.2 _____ 6.3 _____

2. **Arrange the numbers from the smallest to the biggest.**

a. 15 147 , 15 471, 15 174 , 10 650 _____

b. 10 231, 10 132 , 10 123 , 10 213 _____

3. **Fill in < or >.**

a. 9 248 ____ 9 284 b. 10 320 ____ 10 230

c. 11 121 ____ 11 112 d. 12 041 ____ 12 401

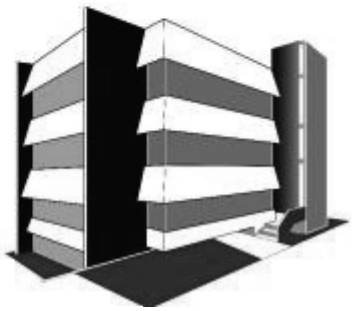
4. **Long division by single digit (no remainder)**

1. $2\overline{)4{,}050}$

5. **Mixed operations word problems**

A multi-level parking lot has 6 levels and there are total of 1,327 parking spots.

Other than the spots reserved for drivers with a disability, there are 285 parking spots for monthly rentals and the rest are for hourly parking. How many spots are there for hourly parking?



SM Assessment 19

Number Assessment

1. **. Complete the following:**

a. 10 000 + 1 000 + 800 + 40 + 2 = ____

b. 10 000 + 5 000 + 300 + 60 + 9 = ____

c. 10 000 + 4 000 + 700 + 6 = ____

2. **Calculate the missing number as quickly as you can.**

a. 1 600 + ____ = 2 000

c. 3 100 + ____ = 4 000

e. 8 800 + ____ = 9 000

g. 4 200 + ____ = 5 000

i. 5 900 + ____ = 6 000

3. True or False?

1	51 + 22 = 22 + 51	_____	(1)
2	24 ÷ 5 = 5 ÷ 24	_____	(1)
3	3(5 +6) = (3 x 5) + (3 x 6)	_____	(1)

4. Mrs. Perkins makes study guides for her class of 21 students. She uses 252 sheets of paper. How many sheets of paper are in each study guide?

A. 12 sheets

B. 231 sheets

C. 273 sheets

D. 5,292 sheets

5. Which equation shows how to multiply $6 \times 5 \times 3$ using the associative property?

A. $6 \times 5 \times 3 = 3 \times 5 \times 6$

B. $(6 \times 3) + 5 = 6 \times (3 + 5)$

C. $(6 \times 5) \times 3 = 6 \times (5 \times 3)$

D. $(6 \times 5) + (6 \times 3) = (6 \times 3) + (6 \times 5)$

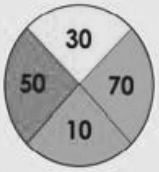
SM Assessment 20

Number Assessment

1. **Quick recall**

48 + ☐ = 100	72 + ☐ = 100
52 + ☐ = 100	32 + ☐ = 100
86 + ☐ = 100	15 + ☐ = 100
45 + ☐ = 100	65 + ☐ = 100
74 + ☐ = 100	39 + ☐ = 100

2. **How fast are you?**



What to do:
- The aim is to see how fast you can fill in the answers in the white rectangles provided.
- Multiply each number on the circle by the same colour rectangles to get your answer.

30		60	
40		50	
70		30	
70		20	
20		20	
10		80	
10		90	
60		50	
20		60	
90		60	

3. Go to your nearest shop and find out what the rate is for:

4. c. Which of the following numbers in the shape are multiples of 3?

_____